

A CONTRIBUTION TO THE ORNITHOLOGY OF THE DARJEELING AREA

BY

M. D. LISTER

This paper gives a short account of some of the birds of the Darjeeling area as they appeared to me during a series of bird-watching holidays spent on tea-gardens there in the years 1943-45. These holidays were of irregular occurrence as they consisted of either ordinary or sick leave from the R.A.F.; they usually lasted about a fortnight, except in 1945 when I stayed near Darjeeling for most of April, May and June. Details of these visits are as follows:—

1.	21 Feb.- 4 March 1943.	Pandam T. E.	Manager: W. Cooksey, Esq.
2.	18 -30 May 1943.	do.	do.
3.	17 -26 Jan. 1944.	Vah-Tukvar T. E.	Manager: the late Mr. E. H. Dobson.
4.	27 May -10 June 1944.	Soom T. E.	Manager: D. Smythe
5.	21 Oct. - 1 Nov. 1944.	do.	Osborne, Esq.
6.	17 April- 2 May 1945.	do.	Asst. Manager: W.
7.	24 May -30 June 1945.	do.	Cooksey, Esq.

My thanks are due to the Managers of these gardens and their assistants, in particular to Mr. and Mrs. Cooksey, for so generously welcoming me into their homes and for allowing me to wander about where I would.

The foothills of the Himalayas must surely possess one of the richest avifaunas in the world. It is certainly the most exciting bird-watching country I have found; you never know what you are going to see next and the possibilities are endless. At the same time the very diversity of the bird life creates an obstacle that is not easy for the casual visitor to overcome. No sooner has he become familiar with the birds most frequently met with during a day on the hillside than his visit is over, and by the time he returns he has lost much of what he had learned about the hill birds. And the very nature of the country makes accurate observation difficult, especially the study of particular problems. Definite identification is often impossible without shooting the bird in question and comparing its skin with specimens in a museum, in view of the bewildering variety of small birds to be found in the district, many of which look very similar to each other in the field. However, by dint of constant reference to all the books available to me, and visits to the Darjeeling Natural History Museum, where Mr. C. M. Inglis gave me unstinted help, I succeeded in identifying many of the birds I came across beyond any reasonable doubt. Where any doubt as to the identity exists in my mind I have made this clear in the appropriate place in these notes.

Apart from the three tea gardens on which I stayed, I visited very few others, and my notes are confined to these three alone. Although they were basically similar in that they consisted of blocks

of Tea bushes [*Camellia thea* (Link)] of varying extent planted on land from which the original jungle had been cleared, and set in a matrix of mixed jungle on the steep hillsides, which were broken in many places by small jungle-clad ravines, these three gardens exhibited certain points of difference, of which the main ones are shown on the next page. The jungle was for the most part a widely varied mixture of deciduous trees and it was difficult to say just what species predominated. Utis (*Betula alnoides*) and Toon (*Cedrela toona*) were usually well represented, but there were many others and here and there were small patches of bamboos (? species). In some places *Cryptomerias* were growing in groves or clumps or as isolated trees. Undergrowth varied from barely any to a dense covering of bushes and brambles, with here and there a tree-fern, and luxuriant herbage sprang up during the rainy season.

The jungle and the tea blocks were so intermixed as to be almost inseparable as distinct habitats with any degree of accuracy, and most of the birds to be seen in the one could also be seen, at any rate at times, in the other. The chief shade trees interplanted among the tea were Sau or Black Siris (*Albizia stipulata*) and Koroï or White Siris (*A. procera*). The principal *Leguminosae* interplanted were Indigofera (*I. dosua*), Boga Medeloa (*Tephrosia candida*) and in some places *Crotalaria*.

Although these three gardens ranged between about 1,800-6,500 ft. A.S.L., the preponderance of my observations were made between 3,000 ft. and 6,000 ft.

MOVEMENTS OF BIRDS

The rhythm of bird life in a district of high hills is inevitably more complicated than that of the plains, where there is no upward and downward movement. Darjeeling lies in a 'migration area' and can count in its avifauna a considerable number of winter and summer visitors as well as birds occurring only on migration.

In addition to this full-scale migration, however, the rhythm of bird life here is complicated by various more local movements and trends. I cannot pretend to have unravelled these complications during my few visits to the district, but it is just possible that some of my notes may help others in this task and I give them for what they are worth. Periodical visits do have the advantage that any gradual movement or change is often more apparent to the occasional visitor than to the man under whose eyes it has been taking place.

One of the most interesting features of bird life here is the mixed hunting parties of small birds. These were especially in evidence on my visits in January, February, March, April and October, though I found a few such parties on every visit. Some of these parties were only quite small, but some (e.g. October, 1944) must have comprised 200-300 small birds of numerous species. In April, 1944, the parties I saw were all smaller than those seen on the previous visit (January) and seemed to be more loosely knit. In some cases smaller parties broke off from the main party and moved off on their own; this was particularly the case with the Shortbilled Minivets, and I feel certain that often at this season the Greyheaded Flycatchers

POINTS OF COMPARISON BETWEEN THE THREE TEA GARDENS

	PANDAM T. E.	VAH-TUKVAR T. E.	SOOM T. E.
<i>Approx. acreage of:</i>			
<i>Tea</i>	... 287 acres	500 acres	500 acres
<i>Jungle</i>	... ?	700 acres	1200 acres
<i>Aspect:</i>	... E.N.E.	N.W.	N.W.
<i>Altitude:</i>	... 2,500 ft.—6,500 ft.	1,800 ft.—5,000 ft.	1,800 ft.—6,000 ft.
<i>Shade trees:</i>	... Many, chiefly Siris	Few	Many, chiefly Siris
<i>Leguminous plants used:</i>	... Fairly extensively	Extensively	Fairly extensively
<i>Main jungle:</i>	... Below 4,000 ft.	Above 4,500 ft.	Above 4,500 ft.
<i>Forestry methods:</i>	... Appeared not to be practised widely	Appeared not to be practised widely	Appeared to be practised thoroughly
<i>Turfing of terraces practised:</i>	... Widely	Apparently little	Apparently little
<i>Factory:</i>	... Small	Fairly large	Fairly large

foraged with the mixed party only because and while it happened to be passing through their particular territory.

In October, 1944, I identified the following species among these mixed hunting parties, and no doubt other species were also present:—

Greenbacked Tit	Brownbacked Pied Shrike
Indian Grey Tit	Black Drongo
Redheaded Tit	Grey Drongo
Velvetfronted Nuthatch	Haircrested Drongo
Cinnamonbellied Nuthatch	Yellowbacked Sunbird
Nepal Babbler	Blackbreasted Yellowbacked Sunbird
Redbilled Leiothrix	White-eye
Redtailed Minla	Speckled Piculet
Yellownaped Ixulus	Darjeeling Pygmy Woodpecker
Stripethroated Yuhina	Large Yellownaped Woodpecker
Orangebellied Chloropsis	Lesser Yellownaped Woodpecker
Whitetailed Blue Robin	Lesser Pied Woodpecker
Grayheaded Flycatcher	
Whitethroated Fantail Flycatcher	Numerous Willow and Fly- catcher Warblers, most of which I could not identify with any certainty.
Yellowbellied Flycatcher	

In April, 1945, I identified only the following among mixed hunting parties:—

Greenbacked Tit	Browneared Bulbul
Redheaded Tit	Silv ereared Mesia
Redbilled Leiothrix	Greyheaded Flycatcher
Redtailed Minla	White-eye
Yellownaped Ixulus	Shortbilled Minivet

A fair number of Willow and Flycatcher Warblers.

That there is a good deal of seasonal movement up and down the hillside is, of course, well known. A frequent comment in Messrs. W. H. Matthews' and V. S. Edwards' 'List of Birds of Darjeeling and Neighbourhood' (1944) is 'Lower in winter'. I doubt, however, whether the extent and details of this vertical movement have been fully worked out yet, or whether the controlling factors are fully understood. The effect of the weather on the food supply is probably the governing factor, but there may well be other factors, e.g. the earliness or lateness of the Monsoon, the amount of rain, the relative amounts of sunshine and cloud, which exercise some accelerating or retarding influence on the movement.

No doubt the dispersal in all directions of fledged young birds, which has been found to take place with some species in Europe, also plays its part in complicating still further the existing complexity of all these movements. I myself saw some evidence of an *upward* movement in October above the usual limits given by Matthews and Edwards (see Sultan Tit and Haircrested Drongo). This is a point which invites further study.

Another point which might be studied with profit is the effect on bird life of the relative amounts of sunshine and shade due to the configuration of the hillsides. Some slopes are so placed that they obtain the maximum available amount of sunlight, while others are in sunshine for only limited periods each day. Whether the seasonal variation in the amount of sunlight falling on a given hillside, which can be very marked, causes any change in the incidence of bird life there is a question which would be very difficult to answer with complete certainty, as any such movement would clearly be very gradual and would probably be overshadowed by the other major seasonal movements. My own observations were not extensive or continuous enough to cover these points.

A factor which may well have some small effect on the bird population of a tea garden is the forestry methods practised there. Purely local changes of population may also be caused by the practice of hard-pruning the tea bushes every fourth year or so, thus destroying a good deal of cover until new growth has again got well started. I believe only certain blocks of tea are treated in this way each year, and that on each garden these are well scattered.

Messrs. Matthews' and Edwards' 'List of Birds of Darjeeling and Neighbourhood' gives the general status of nearly all the birds occurring there and is a great help to a visiting bird watcher. The authors admit, however, that the list is probably not completely exhaustive and in 1945, not much more than a year after its publication, Mr. Edwards himself told me that no less than seven further species had been identified in Darjeeling itself. I hope, therefore, that the following notes, which I believe to be accurate as far as they go, may add something to the stock of knowledge being accumulated about the birds of Sikkim, and that they may perhaps be of some help to others in the work of interpreting the rhythm of bird life on these fascinating hillsides.

For the sake of brevity I have referred in the following pages to Pandam T.E. as 'A'; to Vah-Tukvar T.E. as 'B'; and to Scom T.E. as 'C'.

In making my own records of bird sounds I used the method devised by W. Rowan (1924), but as this entails the use of various symbols which are difficult and expensive to print, I have used another, and rather less accurate, method in the following notes.

Jungle Crow (*Corvus macrorhynchos*)

Status: A few usually about on all three gardens, in the shade trees almost as much as in the jungle. No seasonal variation in status noticed.

House Crow (*Corvus splendens*)

Status: I saw none on A or B, but there were usually a few to be seen on C about buildings, in the forest, and in the shade trees.

Yellowbilled Blue Magpie (*Urocissa flavirostris*)

Status: I saw them only irregularly on all three gardens in January (a party of 7-8), February, May and October (1-2 each), in both jungle and shade trees.

Voice: 28-2-1943. A rather hollow-sounding k-k-k-ok-ok-ok the bird rising and stretching upwards on its perch and then bowing slightly. Tail frequently flirled with a little upward jerk, but most of the time it was merely waved indefinitely about. This bird flew away with a heavy, though quite powerful flight, giving a loud, rather mellow ko-we-wak (low-high-low) as it went.

Green Magpie (*Cissa chinensis*)

Status: Not seen on A or B; 1-2 seen and heard on C in April, June and October, all in jungle.

Voice: 6-6-1944. One called several times with a kik-wee (high-falling). The more usual call seemed to be a rather raucous mewing note. 29-4-1945. One gave a loud, penetrating, and rather tinny courlye-tya (high, rising-low) several times.

Tree Pie (*Dendrocitta formosæ*)

Status: Seen on A and C only, mostly in jungle but not infrequently in shade trees. Usually there were only a few about, but they seemed more numerous on my visits in May and June, when they were often in small parties.

Voice: 28-2-1943. A frequent wokuwak'awk with strong emphasis on the penultimate note. This was followed by some higher, fairly rounded, chattering notes of which I was unable to make any record.

22-10-1943. One was working through fairly dense tree jungle, calling at fairly frequent intervals, each time with the same call: kak'l-ik'l-aa-kaa (low-high-low-low).

25-4-1945. The calls heard included the following: k-k-k-k-t-t-kok (high-low, slurred); kawelu-ja (low/high, slurred-low) repeated several times; kik'kala'ka-loi-u (falling/rising-low) with variations.

Grey Tit (*Parus major*)

Status: In October, 1944, I am quite convinced that I saw on Soom T.E. at least one, and I believe 2-3 others, of this species, with which I was very familiar from the plains of Bengal. Unfortunately I did not at the time realise the unusualness of their presence in this district and did not take down a full description, or even an exact note of the height. In spite of an urgent exhortation later on to borrow a gun and go out there and then to shoot one, I was unable to produce a corpse, and I am afraid, therefore, that if the old maxim 'What's shot is history, what's missed is mystery' is still accepted as the guiding principle, my record will not be admitted, though I know my identification to have been correct.

Greenbacked Tit (*Parus monticolus*)

Status: Seemed fairly plentiful on all three gardens, though I saw fewer on my autumn and winter visits than in the spring and summer. I quite often found them foraging among the tea bushes and shade trees.

Redheaded Tit (*Aegithaliscus concinnus*)

Status: A few parties seen on all three gardens at all seasons, almost in jungle. I could detect no real change in status.

Recognition: Continually on the move, picking about among the leaves high up in the trees, or perhaps among dense bushes on the side of a ravine, hanging upside down and clinging sideways to the twigs, though often remaining still for a second or two. When one flew to another clump of bushes the others would follow in a straggling crowd, the movement, although one of only a few yards, taking perhaps a minute to complete.

Voice: Various dates: A soft trr-trr-trr or tz-tz-tz, difficult to describe phonetically, was given continually. Another party called almost continuously with little, almost bell-like notes while they foraged. Also a very frequent, soft, rustling prrri-prrri.

Sultan Tit (*Melanochlora sultanea*)

Status: A single bird seen 30 October, 1944, near a mixed party of tits and other small birds (mostly warblers) about some *Boga Medeloa* bushes among tea at 4,500 ft. Later seen following a mixed party of Shortbilled Minivets and Pied Shrikes with several Drongos in mixed deciduous jungle with thick undergrowth, also at 4,500 ft.

Recognition: The first time I sighted it the sun was almost directly behind it, so that details of its colouration were not discernible, and it struck me in silhouette as being rather like a small Oriole. Later I got good views. This bird flew to a clump of bushes where it clung upside down near the top of a spray, apparently extracting seeds or insects, and also climbing about. Once it caught a large winged insect—probably a grasshopper of which thousands were then present.

Voice: Now and again it would give a soft, high-pitched tyu. I also heard a single phrase of fairly rounded, though rather strident notes, which I think was given by this bird; but of this I could not be absolutely certain.

Cinnamonbellied Nuthatch (*Sitta castanea cinnamomeiventris*)

Status: One seen on A and two on B, while on C in October some were present among nearly every mixed hunting party. Seen only in jungle, with one possible in tea and shade trees on C. I saw none on C in April, May or June.

Voice: 25-2-1943. One gave a quiet ti-ti-ti continually while foraging, also a fairly loud, prolonged tsip. I also heard a much louder, more raucous note given in alarm on discovering my presence.

Behaviour: 25-2-1943. One worked over a large siris tree, starting near the bottom of the main trunk and working upwards, spiralling irregularly and sometimes stopping and turning completely round so that its head was downwards while it explored some crevice. It worked over the main branches more or less systematically and then gave its attention to the thinner branches towards the top of the tree, where it seemed equally at home. Sometimes it worked downwards as well as upwards, and often hammered vigorously. Flight bounding.

Velvetfronted Nuthatch (*Sitta frontalis*)

Status: One party reported by a competent observer on C in June, and I saw one in October 1944, both in jungle. I saw no others for certain.

Rufousnecked Laughing Thrush (*Dryonastes ruficollis*)

Status: Fairly plentiful on all visits on each garden except B (January) where I saw none. I found them equally among the tea bushes and the edges of (though never far inside) the jungle near the tea. On C in June 1944 I found that they often emerged from the tea to the edge of the jungle towards dusk, possibly for roosting purposes.

Recognition: They spend most of their time among and under the tea bushes and undergrowth, but often they will flutter up into a larger bush and stand flirting their tails, which seem cumbersome and disproportionately large and floppy, gradually hopping further and further up towards the top of the bush and then flying down among the lower bushes again. They frequently indulge in what seems to be calling and answering each other, and I have heard as many as four birds join in, though they may all be invisible to the watcher. Flight rather heavy and ungainly.

Voice: 24-5-1943. 2-3 were foraging together among tea. One flew up into a small siris tree and sang. The song was varied, but one or two phrases formed the basis of the theme, upon which many apparently impromptu variations were grafted. The general effect was quite pleasing, though perhaps a little uninteresting, and not to be compared with the song of, say, a Whistling Thrush, which it in no way resembled, being altogether much fuller in tone, more broken and the whole *timbre* different. Specimens of the basic phrases were as follows:—

Pouki-wurki-pouki-wurki (rising in 'steps')

Prrurti-witeu-witeu (the second syllable of the first note being high, and the two last notes falling).

Witeu-sprutsita-pretuu (the last syllable of each note being pitched lower than the penultimate one).

These notes and their variations, with a fair number of extraneous notes and groups of notes, were often combined into phrases of fair length; but the effect was rather detracted from by the interpolation of single notes, much in the same manner as a Common Myna sings.

Among other calls I have at various times recorded these:—

- (1) A loud prui-prui.
- (2) Chre-chre-che-chui-chi starting high and falling.
- (3) A clear, loud, pwe-tyu—se-pwe-tyu—se-pwe-tyu—se-pwe the first syllable of each note being higher than the others.
- (4) A clear, loud, ringing peuklu-peuklu (high/low) rather like a staccato version of the word 'bugler'.
- (5) A loud, powerful kwik-kokoiu (high-low/high/low) repeated several times as a phrase, and sometimes broken when bits of it were given separately.
- (6) One would call with a loud, clear kyu-wa-kyi (high-low-high) and another would at once answer with the same call. Then a third bird joined in and answered each call with a sharp kyi.

Greysided Laughing Thrush (*Dryonastes caerulatus*)

Status: Two believed seen in jungle on C on 19-4-1945 at 4,500 ft., but I caught no more than a glimpse.

Blackgorgetted Laughing Thrush (*Garrulax pectoralis*)

Status: 2-3 believed seen among tea on A on 20-5-1943 (altitude not noted), but I was too far away for certainty. The general colouring was: head and chest black; remainder dark brown with a touch of yellowish in the wings. They were very noisy and called continually with a variety of notes, of which the predominant ones were s'prepa-prepa-prepa . . . s'pre . . . wou-wou . . . wou-pi—sik (the first syllable of all the double notes being high and the second lower, and the last note being low-high—high).

Necklaced Laughing Thrush (*Garrulax moniliger*)

Status: Several believed seen on C on 6-6-1944 in thick jungle with tall trees close to the Little Rangit River (approximately 2,000 ft.). Flight very awkward and the birds glided a good part of the way from one tree to another with outstretched wings and tail. Once in a tree, however, their movements were much surer and less cumbersome and they turned actively this way and that, flirting their big tails and calling (no record of call). Identity almost but not quite certain. Crown and nape rufous yellow; forehead and sides of head medium grey; throat and neck white, bordered with a fairly broad blackish necklace; rest of upper parts grey-brown; rest of lower parts pale grey-white.

Whitethroated Laughing Thrush (*Garrulax albogularis*)

Status: Believed seen on all three gardens in both tea and jungle. One believed seen on C at 5,000 ft. on 27-5-1945. The only certain identification was on A on 28-2-1943 (altitude not noted).

Voice: 28-2-1943. Wauk-waakawa (high—low/high/low).

Redheaded Laughing Thrush (*Trochalopteron erythrocephalum*)

Status: Seen in small numbers on all three gardens in February, April, May and June in both tea and jungle.

Voice: One of the most striking and insistent calls I heard was a loud towit . . . towit (low/high . . . low/high), sometimes given separately, sometimes several times running, less often mixed in among other calls.

Another call was a liquid pwi or poui (all one syllable), and a harsh, not very loud che-che-che-che all on the same note.

Another bird called repeatedly with a loud preuri (falling/rising and slurred), often repeated more than once.

Crimsonwinged Laughing Thrush (*Trochalopteron phoeniceum*)

Status: One believed seen in tea on 17-4-1945 and two in jungle at 4,500 ft. on 26-5-1945, both on C.

Striated Laughing Thrush (*Grammatoptila striata*)

Status: Believed not infrequently seen in jungle and one probable one in tea in May, 1943 on A. I saw no recognisable sign of this species on my other visits.

Rusty-cheeked Scimitar Babbler (*Pomatorhinus erythrogenys*)

Status: Identified with certainty only on C in June 1945, in jungle at 4,500 ft., but strongly suspected on C in October, 1944 and April 1945. I think I probably overlooked this species on other visits, through never having seen it, and I suspect that it was better represented than its occasional appearances in public seemed to suggest.

Voice: The only note I managed to record was a fairly loud qrrp.

Spotted Babbler (*Pellorneum ruficeps*)

Status: Several seen in tea with other babblers (not identified) on A on 25-2-1943. Altitude not noted.

Blackthroated Babbler (*Stachyris nigriceps*)

Status: In tea: One seen on C at 4,500 ft. on 20-4-1945. In jungle: 3-4 on A on 28-2-1943. 3 or more on C in June 1945.

Voice: 28-2-1943. An explosive chhrrri, repeated several times when my presence was discovered.

20-4-1945. A repeated, loud, insistent tweeye-t'twa (rising—low) with very little variation.

Redheaded Babbler (*Stachyridopsis ruficeps*)

Status: 1-2 parties seen in jungle on A in February, 1943.

Voice: Called continually with a single, high, thin note.

Yellowbreasted Babbler (*Mixornis gularis*)

Status: A party of 12-20 believed seen on A on 26-2-1943. Upper parts a nondescript brown; wings and tail blackish; lower parts lemon

yellow, brighter on abdomen. They worked along under the tea bushes. As I approached, some of them flew over the tops of the bushes, perching for a few seconds on a protruding stump of wood *en route*. All the time I was near they kept up a quiet, rustling calling, rather like shr-shr-shr, but impossible to describe exactly. Exact altitude not noted, but I believe it was about 3,000-3,500 ft.

White-eyed Quaker Babbler (*Alcippe nepalensis*)

Status: I saw this species only on C, always in jungle or secondary bush growth. On 9-6-1944 at 4,800 ft. I found a family of parents and several fledged young ones. In May-June, 1945 I saw several birds. On 26-10-1944 I found several in a mixed hunting party of small birds in dense bushes in a ravine at 4,500 ft.

Behaviour and Voice: 9-6-1944. My attention was first drawn to the birds by a sudden movement in the undergrowth only a few feet away, followed by a low, rustling, whispering calling. Then suddenly the whole party of parents and youngsters flew past me to the bushes at the other side of the path. The parents were very perturbed and darted hither and thither among the undergrowth; they kept very well under cover themselves, though I could often catch clear glimpses of them, when the white ring round the eye was conspicuous. One of the young birds perched on an exposed branch and gave a quiet dzi-dzi, which provoked a fresh outburst of activity and calling on the part of the other birds. Their calls consisted chiefly of a rapid, high-pitched dzi-dzi-dzi-dzi-dzi, and a very soft, whispered, high-pitched pi-pi-pi-pi-pi-pi-pi-pi-pi-pi.

Blackheaded Sibia (*Leioptila capistrata*)

Status: Seemed fairly plentiful on all visits, though in April 1945 there did not seem so many on C (2,000-6,000 ft.) as higher up about Darjeeling itself. In January, 1944, I found them only just above the Little Rangit River among tea bushes, but otherwise I saw them only in jungle. In January they often seemed to be in company with Yellownaped Ixulus.

Voice: The only calls I have identified from this species are:—

(1) A harsh, rasping chrai-chrai-chrai-chrai-chrai, the *a* being pitched low, the *i* high.

(2) A very soft, low-pitched tyip . . . tyip . . . tyip or tsi . . . tsi, scarcely audible 15 yds. away.

Stripthroated Yuhina (*Yuhina gularis*)

Status: 1-2 seen in jungle on A in May, and a few seen in jungle, usually in mixed parties, on C in October.

Slatyheaded Yuhina (*Yuhina occipitalis*)

Status: 30-5-1945. Soom T.E. A party of half a dozen or so small birds was foraging among herbage and bush undergrowth growing among dense mixed jungle at 4,500 ft. My attention was first attracted to them by a low, soft, rustling calling which seemed to be coming from the herbage almost at my feet. This was con-

firmed by a slight movement, but the birds were adepts at keeping under cover, though several times they came up and perched on exposed branches where I got a good view of their upper parts. Size: about the same, or possibly slightly smaller than a Redbilled *Leiothrix* (*Leiothrix lutea*). Forehead and crown greyish brown, fairly heavily streaked bluish-white; streaks ill-defined, but the general effect was that they ran from front to back. Nape plain, warm brown. A narrow white half-ring round upper half of eye was conspicuous; I could see no sign of the lower half of this ring, but this might have been due to a trick of the light. Rest of upper parts warm brown. Lower parts (I had little more than a glimpse) seemed fairly bright orange brown. Tail short, broad, square, warm brown. Bill horny brown. Legs yellow-brown.

Yellownaped *Ixulus* (*Ixulus flavicollis*)

Status: At least one party seen in tea bushes just above the Little Rangit River on B in January 1943; otherwise seen only in jungle. Some seen on every visit except the first, but they seemed more numerous in October and January, when some were with almost every mixed hunting party I found.

Recognition: Movements rather more leisurely than many small birds, though their examination of the foliage seemed very thorough. The orange collar round the hinder neck and the brown crest are usually easily seen.

Voice: Various dates.

- (1) A soft high-pitched tyuk . . . tyuk, the *k* being slurred.
- (2) A soft tyityi-tyuk (high/high-low, slurred).
- (3) Tyup-tyup . . . tyu (high-high . . . low, slurred).
- (4) One party kept up a continual *pizzicato* twittering which rose, when one section of the party detached itself and flew to another clump of bushes, into a much louder, raucous note.
- (5) On 26-10-1944 several birds of this species were with a large mixed hunting party. While these birds were present a loud song was continually given. I never managed to see any bird in the act of singing, but this song seemed so frequently to emanate from just about the same spot as these birds were foraging that I very strongly suspect it was given by them. The basis of the song was a: Twe-tyurwi-tyawi-tyawa (high-low/high-low/high fall-ing/low). This basis was frequently varied, but its general character could always be recognised in the variations.

Redbilled *Leiothrix* (*Leiothrix lutea*)

Status: Seen in tea only on first visit, otherwise only in jungle. Noted as plentiful on all visits except in January, when I saw none. In October some were with almost every mixed hunting party.

Recognition: The orange breast and the red and yellow in the wings are usually conspicuous.

Voice: Various dates. Song: A full and rounded warbling, not unlike that of the Garden Warbler [*Sylvia borin* (Bodd.)]. Wings frequently flirited while singing.

Other notes:—

- (1) A continual and unvaried pe-pe-pe-pä (high-ris-ing-lower), clear and fairly loud, but rather wistful and piping. On another occasion I recorded this note as a pü-pü-pü-pü-pü, all on the same note, clear and piping and given rapidly.
- (2) A continual, soft muttering che-che-che, fairly high-pitched.
- (3) A loud, rustling call of which I made no phonetic record.
- (4) When disturbed, a somewhat explosive k'd'k-chä-jöjü (the last note higher than the second), followed by a call sounding something like pile-pile-pile, each 'word' consisting of the same two notes the second of which was pitched higher than the first.

Redtailed Minla (*Minla ignotincta*)

Status: Noted as fairly plentiful on every visit, very often in mixed parties. Fewer seen in May and June. Seen only in jungle.

Behaviour: Their behaviour varied, possibly according to whether my presence was known or not. At times they would hop about and perch quite openly on the upper parts of the bushes. At other times they would dash helter-skelter for the deeper cover of the centres and lower parts of the bushes, where they would creep about, giving a low murmuring note. I saw one bird ascend a sloping branch in a series of small hops and sidling movements.

Voice: Various dates.

- (1) A continuous, rather scolding calling, fairly varied, but of which the burden was choi-choi-choi-chu-chi-choi-choi-chu-choi-chi-chi-chu (the first three notes low, the fourth and fifth rising, the sixth and seventh low, the eighth high, the ninth low, the tenth high, then falling).
- (2) A rather sharp, high-pitched wi-wi-wi while flying from one bush to another.
- (3) A loud chik (slurred and high-pitched) repeated 7-8 times.
- (4) A fairly loud twiyi-twiyuwi (high-high/low/high).
- (5) A ringing se-tyewi-tyewu-tyewu (high-high/falling-higher/low).
- (6) A very rapid p'tyityityi pitched high.
- (7) A frequent, high-pitched tsi . . . tsi.
- (8) A rapid chattering, high-pitched chititititititit.
- (9) A loud, shrill, very tit-like whi-whi—te-sik-sik (low-low—high-low-low).
- (10) A loud, clear tye-tye-a-tyü.

Nepal Cutia (*Cutia nipalensis*)

Status: 29-4-1945. Soom T.E. Two believed seen flying between trees in a large ravine at 4,500 ft., though I had only a glimpse of them. In general appearance, seen from above, they were not unlike shrikes. Head black on sides, slaty-blue on crown. Back seemed entirely chestnut. Tail black, not so long as in many birds of a similar size. Wings slaty-blue, black and white. Lower parts appeared whitish, but I did not get a good view. Size roughly the same, or perhaps a little smaller than a Blackheaded shrike (*Lanius nigricaps*).

Redwinged Shrike-Babbler (*Pteruthius erythropterus*)

Status: Seen only on C in jungle, where I found several pairs in April, and noted them in May and June as fairly plentiful.

Recognition: Rather clumsily built; movements often somewhat ungainly and jerky. Always on the move, exploring leaves and crevices for food, hopping and clambering about among the twigs, now and again flying with hurried, weak wing-beats to a new perch. The shortness of the tail was very striking.

Voice: 27, 29-4-1945. A low, liquid pik . . . puk was given when two were foraging together.

A single ♂ kept giving a variety of calls as it foraged, some soft, but mostly fairly loud. My attention was first attracted by what appeared to be the song, as it was repeated frequently and loudly and had fair carrying power: Pu-sitsiteu (low-high/high/low) . . . pu-sitsiteu (low-high/high/low) . . . pu-sitsiteu-sitsiteu (low-high/high/low-high/high/low) . . . su-teutu (low-high/falling).

The most characteristic and frequently used phrase was the first, but now and again the double version was given. This combination was occasionally varied by giving the last phrase on its own, repeated rather rapidly several times. Now and again the song was interspersed with a low chrri . . . chrri.

Orangebellied Chloropsis (*Chloropsis hardwickii*)

Status: I found this species only on C, as follows:—

June 1944, one believed seen in jungle at 5,000 ft. October 1944, several seen in jungle. April 1945, one seen once in shade trees among tea. May and June 1945, seen occasionally in shade trees, but always 1-2 in evidence about same place in jungle, 4,500 ft.

Voice: October 1944 and May 1945. The song was varied and included many notes which could easily be mistaken for those of other birds, including the Bulbuls, Drongos and Tits, and the usual call of the Crested Serpent Eagle, if one did not see the singer. I was unable to distinguish any particular phrase or combination of notes which always formed part of every song, but the following were among those I recorded:—

(1) Tshiwatshishi—watshishi—watshishi (high/low/high/high—low/high/high—low/high/high), with many rambling variations.

(2) A soft tit-like titu-titu-titu-titu-ti the first note in each pair being pitched high, the second low.

(3) A low tp-tp-tp-tp-tp-tp-tp.

(4) A loud, rapid ti-ti-tsyi, the latter note repeated 7 times and followed by a prolonged hoarse, scolding note.

(5) Pitu-pitya-pitya (high/low-rising-lower/high) repeated twice and followed by pitu (falling).

(6) Tyawit-tyatyawi (repeated 3 times)—tya (low/high-low/high/high-low).

(7) Tsitsawaitsei-tsawaitsei (twice) (falling/low/rising—low/rising).

(8) Siu-siu-pse-sitsitse-psi-psi-seu-siui-siu-siu-psiui (high-high-higher-low/low/high—high-high-falling—rising in middle—lower-low-rising in middle).

On one occasion so many different notes were given that I thought a mixed hunting party of small birds was present, but no other birds appeared.

Silver-eared Mesia (*Mesia argenteauris*)

Status: Only one seen, on 23-4-1945, on C, in a small mixed hunting party in secondary jungle growth at 3,500-4,000 ft.

Black Bulbul (*Microscelis psaroides*)

Status: Plentiful on A and C, but I saw none on B in January, and only a few on C in October. Plentiful in April, rather fewer in May, and towards the end of June there were several small parties about, which I think contained young birds. Seen mostly in tree jungle, but I found them foraging freely among shade trees among the tea in April, May and June.

Voice: Generally rather noisy. Notes harsher and less varied than those of the Striated Green Bulbul. The 'song' seemed to consist of a long series of mostly monosyllables of varying tone and pitch, punctuated at frequent intervals by a single, high conspicuous, rather bell-like note. I also heard a fairly loud, rapid wurkiyu (rising/low) repeated several times at fairly short intervals.

Behaviour: At any rate in the breeding season they were inclined to be very aggressive, and I saw them attack and drive off a Large Hawk Cuckoo, and on another occasion a Whistling Thrush. In one case a pair of Bulbuls followed the Cuckoo into a tree and perched only a foot or so away from it. They made frequent pecking attacks on it and I saw some pale breast feathers dislodged, the Cuckoo flinching, turning to face its attackers, fanning out its tail and raising its wings.

Brown-eared Bulbul (*Microscelis flavala*)

Status: Seen only once, on 20-4-1945 on C, in fairly dense mixed tree jungle at 4,500 ft., among a mixed hunting party of small birds.

Rufousbellied Bulbul (*Microscelis macclellandi*)

Status: One seen once for certain, on 25-4-1945 on C, in trees in fairly open mixed forest at 4,800 ft. 1-2 believed seen on C in May and June 1945.

Recognition: General colour brown, tinged green on the back, wings and tail. A lighter-coloured stripe on each side of the neck. A short, rough crest, not very conspicuous. Flight rapid and powerful.

Voice: My attention was attracted by its loud, clear, rather sharp calls, usually a double tsiyi-tsiyi, pitched high and sometimes

given three times. This call was repeated numerous times in succession, at first with very little variation, but later with a good deal.

Striated Green Bulbul (*Alcurus striatus*)

Status: A few seen on all visits, but only in May and June 1945 did I find them at all plentiful. I saw them only very occasionally in tea or shade trees as they kept almost entirely to tree jungle, where they usually seemed to keep to the upper branches.

Voice: Various dates. A party would often keep up a continuous series of full, clear, pleasant warbling notes, rather disjointed but even so of the warbling type. One or other of them was almost always singing or calling. The only specific calls I recorded were:—

(1) Tyiwut (high/low, slurred), rather sharp and given continually.

(2) A loud pyik . . . pyik (high and slurred) given several times and followed after a pause by several more of the same notes, merged with a rapid string of variations thereon.

Redvented Bulbul (*Molpastes cafer*)

Status: Plentiful on all three gardens, where they foraged in the tea, the shade trees and leguminous shade plants, and less often in the jungle. In January (B, 1944) they were well represented in one or two mixed parties of Bulbuls and there were also a few by themselves. In February (A, 1943) I found them mostly in pairs, though there were still several flocks. In April (C, 1945), and May (A, 1943 and C, 1945) they were mostly in pairs, and in June (C, 1944 and 1945) the position was the same, though there were signs of family parties beginning to form. In October (C, 1944) I found them mostly tending to be in flocks.

Voice: As none of my notes refers to birds in the Darjeeling area I have not included them here.

Behaviour: 24-5-1943. A pair was clinging to the main trunk of a Siris tree, probing into the patches of green lichen growing there. Normally I saw them only on the less vertical twigs and branches.

27-5-1943. A pair mobbed a Tree Pie.

Whitecheeked Bulbul (*Molpastes leucogenys*)

Status: The annual cycle appeared to be similar to that of the Red-vented Bulbuls (q.v.), though I think this species was on the whole a little less plentiful. In May 1943, on A, I noted a tendency to keep towards the edge of the tea blocks where the jungle undergrowth gave additional cover.

Voice: 25-2-1943. A party of about 30 was feeding among tea bushes; one gave a soft, creaking kyä-yä-yä, pitched low. My other notes do not refer to Darjeeling birds.

Behaviour: 26-2-1943. A Black-headed Shrike flew onto a branch on which two Bulbuls were perched, and about 2 ft. from them.

At the time they were standing about 18 in. apart, but on its arrival they hopped close together and stood facing it and scolding hard. They did not actually mob or attack it, as I have seen them do to a Black Drongo, and as soon as it flew away they took no further notice.

26-10-1944. Several were foraging among the tea bushes. They repeatedly made steep sorties into the air, apparently after insects, returning just as steeply to the bushes, or else to a neighbouring tree from which the next flight was made. In these flights the white tips to the tail feathers showed up conspicuously as a black and white check pattern.

Brown Dipper (*Cinclus palasii*)

25-5-1943, A. A single bird seen, well down the valley, which I think was probably a young one.

Blue Chat (*Larvivora brunnea*)

Status: January 1944, B. A single ♂ seen among fairly dense bushes and brambles at the edge of a small ravine, on 23rd January. My attention was first attracted by a soft robin-like tt-tt-tt and after several minutes the bird came up on to an upper spray of the bush in full view, and then dived back under cover with a somewhat louder call of alarm. The following day a ♂ suddenly flew down the hillside at tremendous speed, making a real whizzing sound and passing close to my head before diving into the cover of dense bushes. I saw it again a few seconds later, but after that the only indication of its presence was the rather soft tt-tt-tt. I believe this species was well represented there at that time, though more often heard than seen.

26-10-1944, C. A ♂ perched in a tree in mixed jungle above dense undergrowth at 4,500 ft. The tail was flirled and the bird gave a soft tit . . . tit now and again. Later I saw what I believe was a ♀ in almost the same place.

Whitebrowed Shortwing (*Heteroxenicus cruralis*)

Status: June, 1945, C. The identity of the birds in question was never established beyond every possible doubt. At one time I thought they must be Red-flanked Bush Robins, but later, after a better view and a visit to the Darjeeling Natural History Museum, I came to the conclusion that they were of this species. I therefore give these notes for what they are worth. I found several birds of the same species scattered over this garden, but I do not remember seeing them on any other visits or either of the other gardens.

The ♂ was entirely deep indigo blue, though I believe more blue-grey on the underparts, and in some lights the blue of the fore-crown looked lighter and brighter. A suspicion of a black mark near the eye. I could never decide whether or not there was a faint white eye-stripe. The general colour of the ♀ was tawny olive-brown, rather greyer on the head. Most of my views were from above, among fairly dense bushes where the light was poor.

Voice: I heard these calls:—

(1) A rather thin, *very* highly-pitched 'song' of two notes, the second one pitched about a quarter-tone lower than the first. Always to be heard at frequent intervals.

(2) A broken succession of very soft, very high-pitched notes in no recognisable pattern, just a broken, inconsequential rambling seei (rising) . . . sree . . . sree-ee (rising).

(3) A very Robin-like tt-tt-tt-t-t-t.

Behaviour: They usually kept either among the heads of saplings (Utis, etc.) and bamboos, or among low bushes, or on the ground itself, and were difficult to watch satisfactorily. I found them at various places on the Soom T.E., usually between about 4,000 ft. and 5,500 ft. In some ways their movements were very like those of a flycatcher. The bird would make short sorties from its perch, apparently after passing insects, returning either to the same or another perch and waiting, singing at intervals. Although they might remain in much the same spot for minutes on end, the particular pair I was watching would keep moving about through the jungle over an area of perhaps two acres, where the song could always be heard.

Indian Stonechat (*Saxicola torquata*)

Status: Curiously enough I saw only one of these birds on all my visits, on 24-1-1944 on B, among tea and leguminous shade plants.

Dark Gray Bush Chat (*Rhodophila ferrea*)

Status: I found them to be rather thinly, though fairly evenly distributed over all three gardens. In January 1944, I found a few at the edge of the jungle, but otherwise they were always in the tea.

Voice: (1) Various dates. A rasping prrei (rising).

(2) 28-5-1943. The basis of the song was a wisachisawisaseu (high/low/high/low/rising/low) with variations. The basis of a song of another bird, which was given very quietly and not at all obtrusively, was slightly different: swetiswetiwttrwe (rising . . ./low/high). The first two groups of syllables were pitched the same, i.e. the first two syllables were practically repeated.

(3) 23-1-1944. A fairly sharp tak-tak-tak-tak.

(4) 22-4-1945. One gave a short song, typically chat-like in character, but perhaps rather sweeter than most, and with fewer wheezing, grating notes than the songs of most of the chats with which I am familiar.

Spotted Forktail (*Enicurus maculatus*)

Status: 1-2 seen on each garden.

Voice: The only notes I heard were a loud, rasping jeer and a harsh, grating krrreect.

Little Forktail (*Microcichla scouleri*)

Status: One reported on Pandam T.E., February 1943, though I saw none myself.

Bluefronted Redstart (*Phoenicurus frontalis*)

Status: In February and March 1943 on A I found both sexes plentiful throughout the tea and cultivated terraces, sometimes both seen together, sometimes alone. In January 1944 on B, I found only a few, well scattered over the blocks, slightly more plentiful than the Black Redstarts.

Voice: 25-2-1943. The first intimation of their presence was usually the soft call tt-tt-tt-tt-tt, which sounds rather like a noisy watch being wound up a few cogs at a time (less than a complete turn of the winding knob). This call is given in flight as well as from a perch.

One bird gave a low, warbling song, much less wheezy than that of a Black Redstart, and quite quiet—almost inaudible ten yards away.

Black Redstart (*Phoenicurus ochrurus*)

Status: In January 1944, on B, I found a few, well scattered in both tea and jungle. In April 1945 on C at least one was regularly to be seen about a block of tea with shade trees at 4,500 ft., but I have no record of it after 25th April.

Whitecapped Redstart (*Chaimarrhornis leucocephalus*)

Status: One seen near bottom of valley on A on 28-2-1943, about stream in ravine. In January 1944 I found them fairly numerous about the Little Rangit River below B.

Voice: 28-2-1943. The call was a loud, clear, penetrating seei . . . seei (rising), which was clearly audible above the sound of the waterfall. I believe the bird also gave a throbbing yibibibibibib, but as I did not have it actually in sight at the time this call was given I cannot be absolutely certain.

Behaviour: Tail flirted in the usual Redstart manner. When perching on the boulders in the stream they often flew into the air, with quick twists and turns, presumably after insects.

Plumbeous Redstart (*Rhyacornis fuliginosa*)

Status: One believed seen on 26-5-1943 on A in jungle. In January 1944 I found them slightly more numerous than the Whitecapped Redstarts about the Little Rangit River about B.

Voice: 18-1-1944. One sang while perched on a boulder only a few inches above the swirling water of the river. The noise of the water prevented my hearing all the notes, and all I could tell was that the song lasted for perhaps 7-8 seconds, and that most of the notes were fairly strident.

Behaviour: They often flew into the air, flycatcher fashion, from the boulders on which they were perching, presumably after insects. Tail frequently fanned and flirted, when the chestnut colour was conspicuous.

Whitetailed Blue Robin (*Muscisylvia leucura*)

Status: I became familiar with this species only on C, where I first saw one among bamboos at 4,500 ft. on 31-10-1944. In April,

May and June 1945, I found them fairly plentiful, though rather thinly distributed from about 4,000 ft. upwards, and the song was to be heard from many of the ravines and patches of jungle.

Voice: 20-4-1945. The song was clear and sweet, with a definite Robin-like flavour about it, and consisted of several phrases each given separately with varying, but considerable, pauses between. The only phrases I was able to record were a te-tle-i-ta—we-i (high-lower, slurred-high-low—rising-high), and a flowing tl'yei-ya-wei (high-higher-low-high—rising). The first of these two phrases was given a good deal more frequently than any of the others.

Behaviour: 20-4-1945. The bird would perch on a twig while singing and lean forwards, at the same time spreading the tail; but curiously enough the white in the tail was hardly ever visible when it did this, though it was conspicuous in flight.

2-5-1945. One which was singing continually raised and depressed its tail quite slowly and at the same time expanded and contracted it. From my position on the path above it the narrow white lozenges in the tail were very conspicuous.

Magpie Robin (*Copsychus saularis*)

Status: I saw none on B, and only a few on A (February, March and May) and C (all visits), where I found them both in tea and jungle.

Behaviour: 27-5-1943. One was attacked and driven away by a Blackheaded Shrike and a Grey Drongo, which flew at it simultaneously.

Whitecollared Blackbird (*Turdus merula albocinctus*)

Status: One believed seen on B in jungle at 4,000 ft. on 25-1-1944.

Greywinged Blackbird (*Turdus bouboul*)

Status: There seems to be a good deal of seasonal movement in this species. In January on B I saw none. In February on A, I saw only one, though I believe a few others were present. In April on C I found only a few. In May 1944 on C I saw only 1-2, though in May and June 1945 on C I found them plentiful. In October on C, again, I found only a few. Sometimes they foraged in the tea and shade trees, but for the most part they kept to the jungle. Some were no doubt overlooked on those visits when they were not in full song.

Voice: Various dates. The song consists of one soft note introducing four high-pitched notes on a descending scale, which at various times I recorded as pee-pee-pee-pä (German ä), si-tse-te-eye-tyu, and cha-tee-tee-tee.

The introductory note is very soft, but the four main notes have considerable carrying power. Heard from a distance they are pure and fluting, but from a few yards away they have a slight edge to them, almost a vibration, as though it were the note and its echo heard together. They can be heard at all hours of the day in May and June (? also in other months). The fall between the first three

of the four main notes is very slight, scarcely more than half-tones, while the drop between the last two is rather greater.

One bird I watched gave a low warbling subsong immediately after the ordinary loud song, lasting only a few seconds, with a slight pause in the middle. In quality it was not unlike the subsong of a European Blackbird (*Turdus merula*), but less rounded and finished, and rather flatter and more insipid. This bird then flew away giving a true Blackbird chuckle as it went.

Redthroated Thrush (*Turdus ruficollis*)

Status: One believed seen in shade trees 24-2-1943 and another on 1-3-1943 on A, but identity not proved.

Blackthroated Thrush (*Turdus atrogularis*)

Status: Several seen on C in October 1944, mostly ♀s, though at least one ♂, usually foraging on main estate road where it ran through thin mixed jungle at about 4,500-5,000 ft.

Plainbacked Mountain Thrush (*Oreocincla mollissima*)

Status: One believed seen 25-10-1944 on C, foraging on the main estate road where it ran through thin mixed jungle at 5,000 ft. Comparison with specimens in the Darjeeling Museum suggested that the bird was of this species, but identity not proved beyond all doubt.

Lesser Brown Thrush (*Zoothera marginata*)

Status: One possibly seen on A on 23-5-1943 in both shade trees and jungle, but identity not proved.

Chestnutbellied Rock Thrush (*Monticola rufiventris*)

Status: One seen twice in tea and shade trees on A in February 1943. In October 1944 on C I found several, including a ♂ and ♀ seen together several times, in both tea and jungle, though not often in the ravines.

Blueheaded Rock Thrush (*Monticola cinclorhyncha*)

Status: I saw none on A or B, but on C I found them fairly plentiful, though rather thinly distributed, in jungle only, in April, May and June, mostly in pairs.

Voice: 29-5-1945. The song had a recognisable thrush-like quality about it, though the notes were not very clear-cut. It sounded roughly as follows, though the lack of definition, or rather the slight slurring of the notes, made it difficult to make an exact phonetic record:—

Tra-tree-trea-tre-prua-tritri-prua-tri and so on (low-high-high/lower-high-low/high-higher-low/high-higher). This was the basis on to which were grafted variations.

Between bursts of the 'normal' loud song, the bird also gave several other much softer notes, though they were still just audible some 50-60 yds. away. As far as I could tell these were exactly similar to the ordinary loud notes, but they were much softer and were not flung out with such abandon for all the world to hear. They were

not quiet enough, however, to be considered as Whispering Song or Subsong.

Behaviour: A bird, perched in a tree, wagged its tail slowly and deliberately up and down.

Blue Rock Thrush (*Monticola solitaria*)

Status: Matthews and Edwards (*op. cit.*) give this species as a not uncommon winter visitor and say nothing about its occurrence in this district in summer. On 9-6-1944 I found a single bird at 4,500 ft. on Soom T.E., about some creepers and herbage growing on a small cliff some 50 ft. high. I have no doubts at all as to the identity of this bird.

Whistling Thrush (*Myiophoneus coeruleus*)

Status: Plentiful on all three gardens on all visits, though less in evidence on C in April, May and June 1945. Not infrequently seen in the tea blocks and shade trees, though they kept more to the hillside jungle and ravines.

Voice: (1) 15-2-1943. A usual note was a loud, rather rasping chrei (rising), given both when in flight and when perching.

(2) 26-2-1943. The song (at dawn) was a very sweet, rather thin, reedy whistle, which followed a definite pattern with slight variations. The notes could have been set to music by anyone with a musical training, as the majority corresponded to the notes on a piano.

(3) 22-10-1944. As one bird chased another through a patch of bamboos, one, or possibly both, gave a peculiar low spluttering noise, something like the noise that is produced by pressing the lips to the back of the hand and blowing, but more sustained and quite impossible to render phonetically.

(4) The usual call, [as in (1) above] can also be described as ty'rree . . . ty'rree (rising), the y not being pronounced as a vowel.

(5) I also heard the subsong. [See Lister (1953)].

Maroonbacked Accentor (*Prunella immaculata*)

Status: One believed seen among fairly dense bramble-type bushes and herbage in mixed jungle at 4,000 ft. on B on 20-1-1944, but identity not proved beyond all doubt.

Sooty Flycatcher (*Hemichelidon sibirica*)

Status: A few seen on A and C in February and October. In May and June I found a few on C at about 5,000 ft. and over.

Voice: 31-5-1944. Song: A very high-pitched, thin, reedy little song, usually of three notes tsee-see-see in descending-scale in half or quarter tones or even less, with occasional variations. Not unlike a thin edition of the song of a Greywinged Blackbird.

Ferruginous Flycatcher (*Hemichelidon ferruginea*)

Status: One believed seen in mixed jungle (? about 5,500 ft.) on A on 24-2-1943, but identity not proved.

Redbreasted Flycatcher (*Siphia parva*)

Status: One, possibly two, seen in mixed jungle in April 1945 on C, but I saw no others.

Little Pied Flycatcher (*Muscicapula melanoleuca*)

Status: In May and June I saw at least two in a mixed hunting party on A, among a dense patch of tall trees in a small deep ravine at 5,000 ft.; and on C 2-3 in a mixed hunting party at 5,000 ft. Possibly these were unmated birds. In October on C I found a 'family' of 7-8 in a large mixed hunting party at 4,500 ft. in jungle.

Voice: 26-10-1944. One bird, foraging with a party of 8-10 others, gave some very soft warbling notes interspersed fairly frequently by equally quiet grating notes. It was so quiet that I could only just hear it 10 yds. away, without being able to distinguish its exact pattern or phraseology.

Behaviour: They kept for the most part among the heads of the trees and seemed to get most of their food inside the trees themselves, rather than from outside the canopies. The birds I watched spent most of their time making little fluttering flights from one branch to another and made few sorties outside the canopy of the tree. They also took some of their food from the crevices of the bark and from the leaves. The flight was easy but less agile than that of many flycatchers.

Verditer Flycatcher (*Eumyias thalassina*)

Status: In January on B I saw none; in February on A I saw only two; in April, May and June on A and C they were numerous, while in October on C I saw only a few again. They often foraged from the shade trees among the tea, though I think there was a tendency to keep more to the jungle. They seemed on the whole to prefer the rather more open parts, but I several times found them in quite thick jungle. I do not remember ever seeing any of this species with the mixed hunting parties of small birds.

Voice: (1) 28-2-1943. One repeatedly gave a tze-ju-jui (high—falling—low/high).

(2) 20-5-1943. A song given frequently at intervals of several minutes, sometimes in groups of 2-3 repetitions, was a pe-tititi-wu-pititi-weu (low—high—lower—rising/falling—low).

(3) 26-5-1943. One gave a very soft, high-pitched p'p'pwe . . . p'p'pwe . . . p'p'pwe before giving the usual trundling little song. On more than one occasion the ordinary song reminded me strongly of that of the European Hedge Sparrow (*Prunella modularis*).

Behaviour: (1) 18-5-1944. One caught a fairly large brown moth or butterfly on the wing and retired to a perch to eat it.

(2) 25-5-1945. One kept flying to the lichen-covered face of a large vertical rock and clinging there, turning this way and that for a minute or so, and then returning to a perch on a nearby creeper. Whether this action was connected with nesting or foraging I could not tell.

Tickell's Blue Flycatcher (*Muscicapula tickelliae*)

I give this record for what it is worth.

8-6-1944. Soom T.E. A flycatcher of medium size (about 6-7 in.) was in a grove of bamboos and deciduous trees growing on the steep hillside at about 4,000 ft. I had it under observation for only a few minutes, but during that time I had several good views. This bird sang continually with a song very like a sharper, shorter and more staccato song of the European Robin (*Erithacus rubecula*). One of the phrases, the only one I managed to note down was tsea-sea-si-e-e-e (high/low-high/low-higher-very high).

Upper parts dark blue, tinged greyish. Chest, throat and chin orange. Rest of lower parts white. The bird was very sprightly in its movements and kept flying up from its perch to catch insects in the usual flycatcher manner.

I puzzled a lot over the identity of this bird and eventually reached the tentative conclusion that it must have been of this species. The Largebilled Blue Flycatcher (*Muscicapula magnirostris*) is stated in the F.B.I. to be 'essentially a bird of evergreen, humid forests'. The absence of blue on the throat and chest seems to rule out the Blue-throated Flycatcher (*M. rubeculoides*), the White-eyebrowed Blue Flycatcher (*M. superciliaris*) and the Sapphireheaded Blue Flycatcher (*M. sapphira*). The white of the abdomen, etc. seems to rule out the Rustybreasted Blue Flycatcher (*M. hodgsoni*), and this same feature and also the size suggests that it was not a Rufousbreasted Blue Flycatcher (*M. hyperythra*). I was not familiar with any of these species and a visit to the Darjeeling Museum did not enable me to clinch the matter.

Greyheaded Flycatcher (*Culicicapa ceylonensis*)

Status: Fairly plentiful on all three gardens on all visits, especially on C in April, May and June. Usually among mixed hunting parties in February and October. Fewest seen in January on B. Mostly in jungle, especially the steeper parts and ravines, but I saw a few in tea.

Voice: (1) 26-5-1943. A quiet chichictrrr (high) with variations.

(2) 29-5-1943. A not very loud pu-pi-pi-pi-pui (low-rising-rising-rising-high).

(3) 23-1-1944. A very frequent call, clear and almost ringing, was a kitwik . . . kitwik (high/low . . . high/low). One also gave a series of longer three-syllabled notes kui-whi-whi (rising-low-low).

(4) 8-6-1944. The 'song' consisted of variations on a theme of se-tyissi-a—tyissi-a-tyi (high-high-low—high-low-high).

(5) 17-4-1945. Several in a mixed hunting party gave a tyi-ti-wi-tyi (low-high-low-high), and now and then a tye-ta-wi (low, slurred-lower-high).

(6) 25-4-1945. One foraging alone; the only note I heard was a very soft pit . . . pit . . . pit, high-pitched and the consonants indistinct.

(7) 29-4-1945. 'I have at last managed definitely to track down the song, which is loud and can be heard almost everywhere just now. It sounds like a tee-tata-tei (high-low-rising) or pee-sata-tei (high-low-rising), the consonant sounds being indistinct. There

is a second phrase, too, that is often given: p'sita-i (high/low-high). Dewar's rendering of the song as "Think-of-me" I found sometimes recognisable.' And see below.

Behaviour: 29-4-1945. 'I found two birds engaged in a performance, which I think must clearly have been the courtship, above a large ravine at 4,500 ft. This ravine is more open than most just here, and has one or two small rocky precipices flanking it. Elsewhere its face is covered with a dense secondary growth of bushes and brambles and a small stream rushes down its centre. The chief performer I assume to have been the ♂ and will call "A", though I had no means of definitely identifying its sex. Its companion I assume to have been a ♀ and will call "B".'

'A kept flying without ceasing for nearly ten minutes, going round and round in a rough circle of some 30 yds. diameter. B would perch on a twig on the face of one of the small cliffs and A would deliberately fly just in front of her and then turn and fly out over the ravine. As soon as he was over the middle of the ravine he would hover for a moment on rapidly vibrating wings, dropping perhaps a few feet. B would then fly straight at him and miss him by only a few inches. She would then fly back to a perch on the cliff and he would circle and again fly just in front of her, when the whole performance was repeated.

'B usually left her perch almost immediately after A had passed her, though now and again she waited until he was actually hovering before she left it; and once or twice she missed her cue completely and did not leave her perch at all until A came round again, having hovered for a second or two unavailingly over the ravine. The whole performance must have been repeated at least 15-20 times while I was there, and I cannot tell how many times before I arrived.

'When A was hovering the grey of his head and the pure bright yellow-green of his rump were very conspicuous. His flight was surprisingly swift and he would often shoot off at a tangent to his previous line of flight. Their wing-beats were very rapid, almost flickering, and A at times almost seemed to dance in the air. Throughout the whole performance both birds called continuously with both the phrases mentioned in paragraph (7) above. I believe, but cannot be certain beyond all doubt, that the longer phrase was given almost entirely by A, while the shorter phrase was given almost exclusively by B.

'Eventually B remained on her perch and A settled on a small bush growing on the side of the ravine and began making short foraging sorties, still calling persistently with the longer of the two phrases.'

Large Sikkim Niltava (*Niltava grandis*)

One believed seen among bushes in mixed jungle on A in May 1943, but identity not proved.

Rufousbellied Niltava (*Niltava sundara*)

Status: I saw 1-2 in May and June on A and C, but no others for certain.

Voice: 23-5-1943. (1) A note sounding like a rather soft cha . . . cha, low-pitched and insistent.

(2) A soft pea . . . pea (high/low . . . high/low).

Behaviour: A ♂ made no attempt to catch passing insects, but simply stood quietly on the stump of a dead bough for some minutes, bobbing the body forwards and its tail up every few seconds.

Small Niltava (*Niltava magrigoriae*)

Status: Two seen on C on 17-4-1945 in mixed jungle.

Voice: The only note I heard was a very high-pitched, thin see-see, the second note being pitched about a quarter tone lower than the first.

Yellowbellied Flycatcher (*Chelidorhynch hypoxanthum*)

Status: I saw this bird only during the winter—two or more in January on B, and in October on C some were in almost every mixed hunting party. In both cases I saw them only in jungle.

Whitethroated Fantail Flycatcher (*Leucocerca albicollis*)

Status: I saw only very few on A in February and May and on C in October (all in jungle), and none on B. On 27 February two were among a large mixed hunting party.

Voice: 23-1-1944. One while foraging gave a fairly soft dji . . . dji.

Behaviour: 27-2-1943. They would flutter up to a branch, usually close to the main trunk, and posture and bow and turn this way and that, continually fanning and closing the tail, and to a lesser extent flirting it. Now and then they would make a sortie away from the tree, but they never went very far. The tail was often fanned in flight. Often they would move rapidly out along one of the main branches. The flight from one tree to another was fairly direct and slightly dipping. They would 'swing' over a lateral branch almost as though vaulting it, and sometimes they hung upside down. They worked down the main trunk as often as (or even more often than) up it. In any direction progress was never direct, but consisted of a series of rapid, jerky twists and turns. I have several times seen one apparently turn head over heels, and at others appear to throw itself sideways or backwards. I have also seen one working over the bank of a ravine, which was well covered with a tangle of roots, ferns and other plants.

23-1-1944. A bird kept to a great extent to the tops and outsides of the bushes, almost tumbling about them as it turned this way and that, continually fanning its tail.

Blackheaded Shrike (*Lanius nigriceps*)

Status: There seemed to be a fair seasonal fluctuation in numbers. In January 1944, on B only a few were seen, all in tea. February 1943, A, numerous, most singly but a few in pairs. April 1945, C, fairly plentiful, though rather thinly distributed. May 1943, A, seemed slightly less numerous than on this garden in February; a nest with one egg in a small sapling among tea at

about 3,500 ft. on 20th May; a single fledged young one seen on 27th May. May 1944, C, a few seen, but they did not appear to be so numerous as on A in May, and much less so than on A in February. May 1945, C, fairly plentiful, though rather thinly distributed. June 1945, C, fairly plentiful, though rather thinly distributed. October 1944, C, only 1-2 seen. In May 1943 and 1945 I found a number in jungle, though the majority kept to the more open ground under tea; apart from this I saw them only in the tea blocks.

Voice: 27-2-1943. One perched on top of a low tree and sang. It started with the usual rasping tjö . . . tjö . . . tjö and gradually this call become shorter and more explosive in quality and the intervals between got shorter. Then came a whole variety of notes, harsh in quality at first but becoming sweeter and fuller as the song progressed. Some of them were repeated 3-4 times in phrases and the general effect was very similar to an inferior and more varied song of the European Song Thrush (*Turdus ericetorum*). This singing was kept up with no appreciable pause for at least five minutes, when it died down and was continued spasmodically with a greater proportion of harsh notes for another 2-3 minutes. The song was surprisingly good for a shrike.

27-5-1943. A (?) young bird was perched on an exposed branch, continually flapping (rather than shivering) its wings and giving a soft harsh jä-jä-jä (rising) at frequent intervals.

Behaviour: 24-5-1943. One attacked and drove off a Black Drongo by flying straight at it, without actually striking it.

25-5-1943. One attacked and drove off a Maroon Oriole out of a small tree by flying rapidly at it.

Greybacked Shrike (*Lanius schach*)

Status: January 1944, on B, one among tea at 4,500-5,000 ft. On 29 May 1943 (A) among bushes in mixed jungle at 6,200 ft. I saw a shrike which I can only think was of this species, though I had it in view for only a minute. On 20-4-1944, (C) I had good views of one in a Boga Medeloa bush among tea and heard it singing (altitude not noted), while I have a further note of seeing 'one or two' in tea during May and June 1945 on C, though no other details.

Voice: 20-4-1945. The song was fairly soft and consisted of a sustained rambling, a mixture of warbling and twittering notes. Its quality was fairly good, many of the notes being well rounded and quite mellow, but it did not strike me as being nearly so fine a song as that of the Blackheaded Shrike. I did not hear it imitate the calls of any other birds.

Behaviour: 19-1-1944. One caught a small moth or butterfly, which it held in its beak for several minutes before eating.

Brownbacked Pied Shrike (*Hemipus picatus*)

Status: I found this species only on C in April, when at least one party was with other small birds, and in May and June on C when I saw a single bird; and on 30-10-1944 a party of 7-8 on C.

Voice: 30-10-1944. A party of 7-8, foraging, kept up an almost continuous calling, sometimes with a tsit-it-it-it-it (pitched high), and sometimes with a call sounding more like the one mentioned by Whistler (1941) as whi-ri-ri—whi-ri-ri—whi-ri-ri.

17-6-1945. One gave a sharp, high-pitched sisisisisisi or tsisisisisisisi.

Behaviour: 30-10-1944. A party of 7-8 was foraging in company with some Shortbilled Minivets in mixed deciduous jungle and its bush and bramble undergrowth. Their behaviour was more suggestive of a flycatcher than a shrike, as they perched in all parts of the bushes and lower trees, and made short sorties into the air after passing insects. They did not remain long on any one perch, but kept moving from one place to another.

Nepal Wood Shrike (*Tephrodornis gularis*)

Status: I saw one only, on 26-10-1944 on C, in mixed trees growing among tea bushes.

Behaviour: It moved slowly along the branches of the trees, working along them in a series of rather clumsy hops. Its whole bearing was somewhat furtive. Its progress from tree to tree was slow, and it spent some time apparently examining the twigs and branches for food.

Scarlet Minivet (*Pericrocotus flammeus*)

Status: Matthews and Edwards (*op. cit.*) give this species as common, but on all my visits I found it much less plentiful than the Shortbilled Minivets. In May 1943, on A, I saw at least one pair, and at the end of May 1945 on C a single ♂ was about for a few days and then disappeared.

Shortbilled Minivet (*Pericrocotus brevirostris*)

Status: I found this species much more plentiful than the Scarlet Minivet on all my visits. They were to be seen in the shade trees among the tea as much as in the jungle.

Voice: 26-2-1943. Several pairs together . . . the first intimation of their presence was invariable the shrill 'song' tiwiwiwi, (low/high/high/high) which was given persistently by both sexes. One I watched kept giving a really churring shrrri (high) . . . shrrrei (high-rising) . . . twi-wi-wi (high-high-low) . . . shrrrei (high-rising) . . . twi-wi-wi (high-high-low) all mixed up together.

24-5-1943. A ♀ on her own was, until I approached, continually giving a loud shi-chiwit-chiwit-chewau (high-rising-rising-lower/low).

25-5-1943. Two ♂s were flying round in company. At least one kept giving a twee-twi-twi—switiswee (high-low-low/rising—rising/high) with variations, as they flew. A little later one ♂ was alone at the top of a bush and two of the ♀s flew to the same bush. At the same time the ♂ started singing a more complicated song (too involved and too rapid for me to be able to record phonetically). The basis was a fairly loud switi (pitched fairly high) with many variations, and often run together to form phrases.

27-5-1943. A ♂ and ♀ were together among trees. Both gave a soft wi . . . wi, pitched fairly high.

21-1-1944. A party of 2-3 ♂s and 4-5 ♀s . . . kept calling with a fairly high-pitched se-sei while foraging: When they flew to another group of trees with the typical, rather hesitating flight, they gave a series of calls, rather like a se-wa-wa-wui—se-wa-wa-wui (each phrase high-low-low-rising) with several modifications and variations.

30-10-1944. The basis of the calls given was a whi-whi-whi-si-wee (high-high-low-high-lower).

Dark Grey Cuckoo Shrike (*Lalage melaschista*)

Status: Plentiful on both A and C in April and May, though I saw fewer in evidence in June.

Voice: 9-6-1944. One gave a song consisting of four notes in descending-scale, which I heard often on this visit.

Behaviour: The text-books all say that the Cuckoo Shrikes never descend to the ground, but on at least one occasion I saw birds hopping about on the ground among tea bushes. For the most part they kept well up in the trees, though I have also seen them working rather surreptitiously through rough undergrowth under trees.

Ashy Swallow Shrike (*Artamus fuscus*)

Status: Fairly plentiful on A and C in April, May and June, and 1-2 still left in October. A pair with fledged young found in May on A; they seemed to have an extensive territory, covering several hundred yards of the hillside.

Field Recognition: Flight very swallow- or martin-like, with something of a Starling's flight in it, continually turning this way and that in a long glide on extended wings, interspersed with short periods of rapid, flickering wing-beats. Tail fairly large and square. Wings tapered sharply on both edges. When seen in flight from above the white on the rump is conspicuous. When perched, they frequently turn the head from side to side.

Voice: 18-5-1943. A rather harsh vit . . . vit.

19-5-1943. The song was introduced by several of the usual rather harsh notes jupjupjupjup-jiji (pitched low, the *j* being soft as in the French 'je'), followed by a series of trilling, warbling notes. The bursts of song were never very long, lasting perhaps 10 seconds; nor were the pauses in between very long, either. The bird frequently turned about on its perch and its tail was continually wagged up and down.

17-4-1945. Several were hawking for insects high above the hillside, calling continually. The calls were somewhat ill-defined and difficult to record phonetically, but as far as I was able to record them they were as follows: wrik-wrik-wrik-wrik (high-pitched) . . . wrā—wrā (low) . . . wrikik—wrā (high—low) with variations.

Behaviour: 19-5-1943. One caught what looked like a large dragonfly and carried it to an upper branch of a tree, where it dismembered it, holding it down on the branch with its feet and pulling the wings off with its beak—a process which lasted some two minutes. It then carried the remains to another tree where a youngster was shivering its wings, but I did not see it feed it.

20-5-1943. A bird with fledged young in the vicinity made a diving attack on a Great Himalayan Barbet, which was presuming to 'sing' in a neighbouring tree. The attack failed to dislodge the Barbet and the Shrike then desisted. But when the Barbet flew off down the valley in a steep glide, the Shrike followed at really tremendous speed in a kind of 'power dive' for at least 100 ft. and pulled out when only a foot or so above the Barbet.

24-5-1943. One dived down on a Maroon Oriole, pulling out of the dive when only a few feet above its head, and driving it out of the tree.

27-5-1943. Two attacked a Jungle Crow at the same time as a pair of Grey Drongos were attacking it. The Shrikes' attack consisted of shallow dives, while those of the Drongos were very much steeper and more spectacular. After a few minutes the Crow flew off and after a parting dive the Drongos desisted, but the Shrikes continued to harass the Crow until it was at least 50 yds. away.

Later a Great Himalayan Barbet was perching in a tree. I saw it look upwards and it apparently caught sight of a Swallow Shrike gliding some 40 ft. above, for it at once dived away down the hillside, obviously scared, though the Shrike took no notice of it.

All these records relate to the same pair of Swallow Shrikes, which had fledged young ones not far off.

Black Drongo (*Dicrurus macrocercus*)

Status: As suggested by Matthews and Edwards (*op. cit.*), the status of this species deserves further study. I found some unaccountable fluctuations and I will therefore give a summary of my detailed notes:—

January (1944, B): A few seen in both shade trees and jungle.

February (1943, A): None noted.

April (1945, C): A few only seen in jungle.

May (1943, A): Fairly numerous in both shade trees and jungle.

May (1944, C): A few in shade trees and jungle (but fewer than Bronzed Drongos).

May (1945, C): A few believed seen in jungle, but identity not certain.

June (1944, C): A few in both shade trees and jungle.

June (1945, C): A few believed seen, but identity not beyond doubt.

October (1944, C): Numerous in jungle and more open ravines.

This was easily the least well represented of the four Drongos I saw.

Voice: 30-10-1944. Two, chasing each other, gave a querulous wee-wee-e—wee (high-higher—high), and a wewiwewiwewi (low/h-i-g-h), while flying.

Grey Drongo (*Dicrurus leucophaeus*)

Status: Although this species seemed to me to be much better represented than the Black Drongo, I did not usually find it very numerous.

January (1943, B): A few—I think slightly more than Black Drongos.

February (1943, A): A few seen, some in pairs.

April (1945, C): Plentiful.

May (1943, A): Rather more numerous than Blacks.

May (1944, C): A few—many fewer than the Bronzed Drongos.

May (1945, C): Plentiful.

June (1944, C): A few—many fewer than Bronzed Drongos.

June (1945, C): Plentiful.

October (1944, C): Only a few believed seen, but none certainly.

They were to be seen both in the forest (especially the more open parts) and also the shade trees among the tea, and in May 1943, I have a note that they seemed to prefer the latter.

Voice: 20-5-1943. One was singing from the upper branches of a large Siris tree. It was the usual type of song with a large number of cheeki notes in it, but there was a large proportion of pure notes, some of them so sweet as to be almost fluting, yet powerful. Tail frequently moved about while singing.

27-5-1943. The song was far better, more complicated and more finished than the usual song of the Black Drongo. It started with a loud, rather grating, metallic se-tuk-tyuk (high-low-high) repeated several times and then went on after a pause into a much more complicated, rambling song, including a kotukakekea (high/low/high/low) with variations. At times the notes were given so closely after one another that the song assumed the nature of a rough warbling. It was all very loud and rather ringing in quality.

28-5-1943. One gave a very good and varied song from a tree. It began with a loud, rapid call switswitswitswit (pitched high) not unlike one of the calls of a Tailor Bird. Then after a pause it began to sing. The song was far more varied and of a better, fuller quality than the usual song of a Black Drongo. Some of the phrases were repeated 2-3 times, while others were more warbling, and others again were rather sharp, short and grating.

21-1-1944. 4-5 foraging together gave a wipwipipip-yurjiu (high-low/high, falling).

Field Recognition: They gave me the impression of being even more agile on the wing than the Black Drongo. In flight the grey of the chest is fairly conspicuous against a dark background, and they seem to me to have rather more gloss on the back than the Black Drongo, but this may be illusory.

Behaviour: 27-5-1943. See under Ashy Swallow Shrike.

Bronzed Drongo (*Chaptia aenea*)

Status: When present this seemed to me to be by far the most numerous of the four Drongos I saw.

January (1944, B): None seen.

February (1943, A): None identified, but presence suspected.

April (1945, C): Plentiful.

May (1943, A): A few seen.

May (1944, C): Very numerous.

May (1945, C): Fairly plentiful.

June (1944, C): Very numerous.

June (1945, C): Fairly plentiful.

October (1944, C): Numerous.

I found them equally in the forest and in the shade trees among the tea.

Voice: 21-10-1944. 3-4 together, singing. The song seemed to me to contain a higher proportion of throaty noises than the songs of the other Drongos with which I was acquainted, combined with other high-pitched chirruping notes.

30-10-1944. 3-4 together, singing loudly and persistently between their foraging sorties. Among other notes, one particular bird gave the following:—

 Tp-chiwik-chiwik-chiwik (low-high/low-high/low-high/low) . . .
 kyipkyipkyipkyipkyip (high) . . . kyawip-ip-i—chirra—kyirra—kyirra
 (low/h-i-g-h—low/high—low/high—low/high) . . . kya—tzit-tzit—kyir-
 ra-kyirra (low—high-high, slurred—high/low-high/low). All the notes were staccato and almost all were very clear-cut. At a distance the song sounded not unlike a poorly-finished song of a European Song Thrush (*Turdus ericetorum*).

Behaviour: 4-6-1944. One flew to a deciduous tree growing on the edge of mixed jungle and tea at about 4,500 ft. It perched there for a few minutes and then flew down and clung upside down to a small spray of leaves, apparently searching for insects. It remained like that for perhaps five seconds, then let go with its feet and clung for a split second with its beak only, and then flew up to perch again in the normal way. Throughout the performance the wings were fluttered for balance.

30-10-1944. 3-4 were in company with 1-2 Black (?) Drongos and 3-4 Haircrested Drongos. All of them spent a good deal of time, in the intervals between foraging and singing, in chasing each other. This they did freely and I think playfully.

Haircrested Drongo (*Chibia hottentotta*)

Status: I identified this species only in May 1943 on A, when they were numerous—rather more so than the Bronzed, though fewer than the Grey Drongos, in both shade trees and jungle; in May 1944 (C) when I found only about one pair; and in October 1944 on C when they were fairly numerous in the jungle (though not much in the ravines), usually in company with other birds and I found 2-3 parties in which this seemed to be the predominant species. Matthews and Edwards say that this species breeds up to 4,000 ft. and is seen lower in winter, but most of my October observations were made between 4,000 ft. and 5,000 ft., so it would appear that these birds had come up the hill. Seen in company with a party of Longtailed Broadbills, and also Shortbilled Minivets and other small birds.

Field Recognition: They are masters of aerobatics, but their heavier build makes them seem rather less agile than most of the other members of the Drongo family that I met. You can nearly always hear their thudding wing-beats.

Voice: 27-5-1943. The usual call was a very clear weeeee-tyik (rising-low) the first note long drawn out and rising, and the emphasis on the second, lower note. Sometimes a syllable ya (low) was added a good deal more softly than the other notes. Occasionally a single tyuuuuuu (rising) was given by itself.

One bird gave a fairly typical Drongo note, though in some indefinable way it was rather different, and the usual cheeki type of note did not enter into it at all.

23-10-1944. About a dozen were foraging in mixed tree jungle in company with about the same number of Long-tailed Broadbills. They called very frequently with a varied assortment of notes, all loud and powerful, some harsher than the calls of other Drongos, others fairly sweet. Once or twice when they were chasing each other I heard a low-pitched, almost grunting call, which was not made by the wings.

30-10-1944. 3-4 in company with some Bronzed Drongos. In the intervals of foraging they perched in the branches of the trees and sang. One bird, which I was watching in particular gave among others the following notes: zör-si (low-high) . . . zör-swi-swi-zaza-sue-sya (low-high-high-low/low-high, rising-low). The z was rounded like the soft French j in 'je'. These notes were followed by a loud, rather clear-cut rambling warbling, not unlike the everyday song of the Common Myna, and this was followed by tsye-tyse-tyse—wewei—tsyi-tsyi—we—wai (high-high-high—lower/rising—high-high—high—low/rising).

Behaviour: 6-6-1944. One chased a Tree Pie, diving at it very fast and then sheering off and shrieking at it, while the Tree Pie dived for cover into the leafy part of a tree.

Tailor Bird (*Orthotomus sutorius*)

Status: Seemed plentiful on all three gardens on all my visits. In October they were often in twos and threes. I found them both in the jungle and in the tea bushes, though they showed a definite preference for the latter in April, May and June.

Voice: 24-1-1944. 3-4 foraging together called continually with a titaweeet (high/low/high), usually repeated several times with no appreciable pause between. A little later they gave another loud clear call tyeea (high/low). One particular bird gave this call in quick succession with barely any pause between. The number of repetitions throughout a period of about two minutes was 19, 4, 8, 7, 8, 3, 5, 5, 3, 5, 3.

Let me here confess that most of the numerous small warblers, which occur so often among the mixed hunting parties and on their own, quite defeated me. I had left my Zeiss glasses at home and had only a rather inferior pair of non-prismatic glasses with me, which did not make identification of these difficult little birds any easier. I managed to identify only a very few of the Willow and Flycatcher Warblers I saw with certainty.

Greyheaded Flycatcher Warbler (*Seicercus xanthoschistos*)

Status: I saw none in January on B, but otherwise they seemed fairly plentiful. Seen among mixed hunting parties in February and

October. They were not shy, though very active, and fluttered about the branches, sometimes perching only a few yards from me.

Chestnutheaded Flycatcher Warbler (*Seicercus castaniceps*)

Status: I saw only one to identify positively, on 22-10-1944 on C among a large mixed party of small birds at 5,000 ft.

Strongfooted Warbler (*Homochlamys fortipes*)

Status: I found none in January or October, but this may merely have been due to their silence, as they are more often heard than seen. On A I found them fairly plentiful in both tea and bush jungle in May, and also in February (though I did not identify them until later). On C they seemed to be more thinly distributed in April (when I heard only one, in bush jungle, and saw none), May and June from about 4,700 ft. upwards. This bird is very difficult to watch as it keeps out of sight among the tea bushes and undergrowth, but with the assistance of Mr. Inglis, of the Darjeeling Museum, and later of Mr. V. S. Edwards, then of Darjeeling, I succeeded in identifying it beyond any doubt.

Voice: 1-3-1943. The call was given persistently every minute or so for some minutes, and was answered by another. It was a loud and penetrating, clear though thin tyüü—tweet-weu (rising, prolonged—high-falling), the tyüü being an invariable introduction, beginning so low as to be only just audible 30-40 yds. away, and rising, and then followed after a tiny pause by the main phrase, which is pitched much higher and louder. On many occasions this phrase has reminded me very strongly of 'tit-willow', and until I discovered the bird's identity I used to think of it as 'the tit willow bird'. Another phrase, which alternated with the above fairly regularly, was roughly the same phrase reversed, with slight variety in it: tyee—tyit-weei (rising—high-low/high) or sometimes tyü—teu-tewe (low—high/low-rising). Once heard these calls would not easily be forgotten; they are ringing in my ears as I write this today in England, ten years afterwards.

20-5-1943. Tweeeeeee—titwuiu (rising—high/lower/low) or tweeeeeeee—tyewiu (rising—high/lower/low) and also tüüüüüüüü —tuwui-i (rising—low/low-rising).

This bird also has another note, a loud, rather staccato tyit (high) . . . tyutyu (low/low) . . . tyit (high) . . . tyutyu (low/low), which appears to be given while feeding. It also has a soft, rather churring alarm note.

Rufouscapped Bush Warbler (*Horeites brunniifrons*)

Status: 19-1-1944 (B). One believed definitely identified among low bushes and herbage in mixed jungle at 5,000 ft., and several other probables seen. The only call I heard was a soft tsik . . . tsik (somewhat slurred).

Brown Hill Warbler (*Suya criniger*)

Status: Some seen on all visits on all three gardens. In May 1943 on A they seemed to me to be less numerous than in February, and

in October 1944 on C, they seemed a good deal less plentiful than in the spring and summer, but this may have been due to their silence. I saw them only in the tea.

Voice: 20-5-1943. A wheezy, almost rustling double note, like a knife being sharpened: t'zeetu-t'zeetu-t'zeetu (high/low-high/low-high/low), usually given in series of 3-4 repetitions.

Blackthroated Hill Warbler (*Suya atrogularis*)

Status: May 1943, A, a pair at about 6,800 ft. in tea, believed with a nest.

April 1945, C, two seen in low brambly bushes among secondary growth at about 5,000 ft.

May-June 1945, C, 2-3 seen together, but exact date and height not noted.

Voice: 28-5-1943. A soft tp-tp-tp-tp-tp while foraging, and when disturbed a soft, scolding chrrrr-chrrrr-chrrrr.

29-5-1943. A fairly soft prri-prri-prri-prri, high-pitched and rather slurred.

25-4-1945. On my appearance one bird gave a soft, fairly high-pitched prri . . . prri . . . prri, which was 'answered' by the other bird with an equally soft, high-pitched tyip . . . tyip.

Behaviour: 28-5-1945. The bird was never still, turning this way and that all the time, twitching its long tail up and down and occasionally vibrating it up and down very rapidly for a moment. It worked its way in little spurts to the top of a bush and then flew down to the cover of the tea bushes. This performance was repeated.

Maroon Oriole (*Oriolus traillii*)

Status: None seen in January 1944, on B, or February 1943, on A, and in October 1944 on C I found only very few. In April, May and June on A and C they were plentiful and vociferous, keeping mostly to the jungle, though sometimes seen in the shade trees among the tea.

Voice: 19-5-1943. A loud, clear, rounded typical call pe-lu-lu-lu (high/low-rising/low) was given fairly continuously.

20-5-1943. (a) A rich, full pelulu (high/low).

(b) Teu-pweu . . . pulelulu (high/lower-lower/low . . . low/high/low/low).

(c) A single, rounded tyou . . . tyou (fairly low-pitched) very similar to one of the calls of the Blackheaded Oriole (*O. xanthornus*).

(d) Tyupeu (rising/low).

(e) A harsh scream for which I could find no phonetic rendering. I think this may have been an alarm call, as it was given when I appeared round a bluff which had concealed my approach.

21-5-1943. One gave a rather rasping waeiae (rising/low/high) or re-aje (high, slurred-low/higher, slurred) in addition to the usual fluting calls. This call was given when the birds came fairly close to me and shortly afterwards.

31-5-1944. The general pattern of the song seemed to be based on a phrase something like this: pe-leulu-loo (high-falling/low-higher).

30-10-1944. One perched for some minutes on the top of a small tree growing among tea bushes and gave every few seconds a harsh kwei-eir . . . kyeir pitched very low.

24-5-1943. A good example of secondary song, which I have described in detail elsewhere (Lister, 1953).

Greyheaded Myna (*Sturnia malabarica*)

Status: I saw 1-2 on A in May 1943 only, including a pair believed to be breeding.

Common Myna (*Acridotheres tristis*)

Status: Always a few about the coolie lines, and not infrequently seen foraging among the tea bushes.

Whitebacked (Hodgson's) Munia (*Uroloncha striata*)

Status: May 1944, C, at least one large flock always to be found about the same part of the hillside at about 4,700-4,800 ft.

October 1944, C. A few seen in forest.

May-June 1944, C. Two believed seen, but identity not certain.

Voice: 31-5-1944. Two birds together now and again gave a low 'chittering' call; on seeing me they gave a low prik.

4-6-1944. A party of 30-40. The whole time they kept up a rather quiet twittering, which varied a good deal in pitch and modulation from time to time.

Spotted Munia (*Uroloncha punctulata*)

Status: January 1944, B, one party of 12 or so believed seen in company with White-eyes (*Zosterops palebroza*) among fairly dense bushes at 4,000 ft., but identity not certain beyond all doubt. May 1944, C, 1-2 in a mixed party in jungle just above the Little Rangit River.

Scarlet Finch (*Haematospiza sipahi*)

Status: 24-1-1944, B, 2 ♂s and several ♀s at 4,000 ft.

21-10-1944, C, a single ♂ at 4,500 ft.

19-4-1945, C, one ♂ and about six ♀s were among a fairly large mixed hunting party of small birds, and another single ♂ was by itself not far away.

Voice: 21-10-1944. One alone, I believe, gave a rather fluting peye . . . peye-e (all high-pitched), but I am not absolutely sure that the call came from this bird.

19-4-1945. A rather creaky kwee-i-u (high-fall-ing), not unlike the notes of a Canary (*Serinus canarius*)

Himalayan Greenfinch (*Hypacanthis spinoides*)

Status: My only record of this species was at the end of April, 1945 on C, when a small party was seen several times among shade trees in the tea at about 4,500 ft., and foraging among hard-pruned tea-bush stools. I saw them only in late afternoon and early evening.

Tree Sparrow (*Passer montanus*)

Status: Fairly plentiful on A and B, but I think rather fewer on C. Present on all visits, usually about buildings, coolie lines, etc. In April, 1945, I occasionally saw 1-2 foraging in the tea and no doubt this was a general practice.

Voice: Their note seemed to me to be more musical and rather more varied than that of the House Sparrow (*P. domesticus*).

Nepal (Hodgson's) House Martin (*Delichon nipalensis*)

Status: I saw this species only on my one visit to B in January 1944, when I found them numerous, with their headquarters apparently about some coolie lines.

Voice: 21-1-1944. The great majority of them were completely silent, but just occasionally one would give a soft, short high-pitched chi-i as it flew.

Behaviour: From about 2,000 ft. to 6,000 ft. they were continually flying round, often low over the tea bushes. One favourite form of aerobatics seemed to be to climb suddenly almost, vertically for some 20-30 ft. and then dive and flatten out when quite near the bushes again. The flight was fast and even, swooping and gliding continually in a smooth flowing flight that reminded me of skating. Often they would fly past no more than 2-3 ft. from where I was standing, and then twist and double in almost incredibly 'tight' turns. If it were not for the white on them one would sometimes never see them until they were right on top of one.

Eastern Swallow (*Hirundo rustica*)

Status: Seen on all three gardens on all visits except October when I saw none. Seemed more plentiful on C than either A or B. Signs of breeding about the factory on C (about 4,500 ft.).

Striated Swallow (*Hirundo daurica*)

Status: Exactly as for Eastern Swallow, except that I saw more of this species on B in January 1944, and there seemed rather fewer on C.

Grey Wagtail (*Motacilla cinerea*)

Status: One believed seen at least twice on B in January 1944, flying about tea, but identity not proved.

One seen once by stream on C at 5,000 ft. in April 1945.

Indian Tree Pipit (*Anthus hodgsoni*)

Status: January 1944, on B, numerous in small parties among the tea and about ravines, rather less so in forest.

February 1943, on A, very plentiful in fairly large parties in tea, and rather smaller parties not infrequently seen in forest.

April 1945, on C, fairly plentiful, especially in jungle, but also in tea. My note does not mention whether they were still in flocks, but at one place mentions 2-3 birds.

Voice: 21-2-1943. A rather weak tze-e—tze-e.

25-2-1943. A soft, high-pitched tsi—tsi . . . tse . . . tse-e . . . tse-e (prolonged).

Vinousbreasted (Hodgson's) Pipit (*Anthus roseatus*)

Status: 19-1-1944, B. I believe 1-2 were among tea bushes at 5,000 ft. I had a good view of one for 3-4 minutes and as it flew away, and I think I caught a glimpse of the characteristic pale yellow on the underside of the wing. In another bird, also flushed from among the tea, the touch of pale yellow under the wing was quite distinct and easy to see against the dark background of the hillside. The only call I heard was a soft tsi . . . tsi, possibly rather shorter than, but otherwise indistinguishable from the call of the Indian Tree Pipit. I feel fairly sure in my own mind that these birds were of this species, but cannot regard their identity as proved.

Upland Pipit (*Oreocorys sylvanus*)

Status: I believe I saw a single bird of this species at about 6,500 ft. above A on 28-5-1943, but the identity must remain unproven. I give my record for what it is worth.

'A large pipit attracted my attention by gliding down, singing, on outstretched wings with tail spread. It landed on a small cultivated terrace cut into the hillside (6,500 ft.) and walked about, proving the grass at its edge for food. The song was a fairly loud sityu-sityu-sityu-sityu on descending notes, when I first noticed it, and this was given while planing down. These notes were also given several times from the ground, but only 2-3 at a time and the intervals between were longer. Later, when I had passed round the corner of the path out of sight, I heard a typically Pipit-like p'se-p'se-p'se-p'se-p'se. I strongly suspect that it was given by this bird and that it was the introductory portion of the song, though I did not hear any more of the song given at the time.

Head: Pale earthy brown; greyish-white supercilium above a darkish brown eye-stripe. *Upper parts*: Pale earthy brown with darker brown markings. *Lower parts*: Greyish white, with slight darker striations across the breast.'

White-eye (*Zosterops palpebrosa*)

Status: Seemed fairly plentiful in jungle on all visits except February 1943 (A), when I probably overlooked them; no doubt they sometimes foraged among the tea bushes.

Voice: 20-5-1943. One, foraging, kept 'singing'. Some of the phrases were as follows: t'ts'ituts-itsusi (high'low-higher) . . . tu'tufi-situ—tafissitu (low'high/low—low/high/low) and a low sit-tyawississi (high-low/h-i-g-h).

29-5-1943. A not very loud sisifesife (high/falling).

23-1-1944. A continual prrree-u (slightly falling).

Nepal Yellowbacked Sunbird (*Aethopyga nipalensis*)

Status: February 1943, A, 1-2 seen. April 1945, C, 1 ♂ and 2 ♀s seen on separate occasions. May-June 1945, C, at least 2 seen. October 1944, C, 1-2 seen. All in jungle.

Voice: 26-5-1943. A small, rather quiet, high-pitched si . . . si.

25-4-1945. Each short flight of a ♀ to a fresh perch was preceded by a sharp, high dzit.

27-4-1945. A ♂, foraging, frequently gave a loud, metallic dzit . . . dzit, and very often this was extended into a kind of short song, something like this: tchiss (high) . . . tchiss—iss-iss-iss (low—ris-ing—high).

Nepal Blackbreasted Sunbird (*Aethopyga saturata*)

Status: 24-10-1944. C. One believed seen in a large mixed hunting party in jungle at about 4,500 ft., but identity not proved.

Streaked Spider Hunter (*Arachnothera magna*)

Status: 30-5-1945. C. A single one seen in fairly dense mixed jungle with thick bush and bramble undergrowth at about 4,500 ft.

Voice: The call was loud, with considerable carrying power. The basis was a rather sharp tyik (high), sometimes softened into a tchik, and it was given either once, twice or three times in quick succession, though more usually twice when it sounded like tyikik or tchikik. Sometimes there was a very slight space between the repetitions.

Behaviour: I saw one several times during the morning and, assuming, as I think, that it was the same bird on each occasion, it moved about the hillside quite a lot. The first time I saw it, it was feeding among the seed-heads of a smallish tree (? species), in which a Grey Drongo and a pair of Orangebellied Chloropsis were also feeding. I saw no sign of any real antagonism between these birds, though the Spider Hunter had a slight brush with one of the Chloropsis when they both landed on the same perch. Later I saw it foraging among some low bush undergrowth growing among tree jungle several hundred yards further along the hillside. After a minute or two it flew to the canopy of a fairly large tree and then I lost it.

When feeding its movements were inclined to be rather rapid and perhaps a little jerky, though they certainly gave no impression of nervous haste and the impression I got was rather one of deftness in its actions. It explored the leaves in which it was interested from all angles, though I never saw it hanging actually upside down. The flight was surprisingly strong and rapid, with fairly fast wing-beats and slight undulations. It called in flight as well as while foraging.

Longtailed Broadbill (*Psarisomus dalhousiae*)

Status: May 1943, A, a single bird seen at 3,500 ft. in jungle.

October 1944, C, 2-3 parties seen between 4,000 ft. and 5,500 ft. in jungle, though not much in ravines.

Voice: 23-10-1944. A party of about 12 in company with a dozen or so Haircrested Drongos, called continually with a single note tse . . . tse or pwe . . . pwe, high-pitched, soft and fairly loud.

Assam Blacknaped Green Woodpecker (*Picus canus gyldenstolpei*)

Status: One seen on 25-2-1943 on A in shade trees among tea.

Voice: A rather weak, not very loud kip . . . kip.

Small Yellownaped Woodpecker (*Picus chloropus*)

Status: A few seen in April, May, June and October, on C, usually only in jungle, but once in a shade tree.

Voice: 27-4-1945. A loud kyerk.

Large Yellownaped Woodpecker (*Chrysophlegma flavinucha*)

Status: Several seen in May and June 1944 and 1-2 in October 1944, both on C in jungle.

Voice: 27-5-1944. A fairly loud, plaintive pee-u . . . pee-u (high/fall-ing).

9-6-1944. One, apparently alone, gave a sort of yelp, sounding something like kyow . . . kyow.

Paleheaded Woodpecker (*Gecinulus grantia*)

Status: 27-5-1943. One believed seen in dense tall trees in a ravine at 5,000 ft. on A, but identity not proved.

Darjeeling Pied Woodpecker (*Dryobates darjelliensis*)

Status: 22-10-1944. C. One seen in mixed tree jungle at 5,000 ft.

Voice: Called occasionally with a low puk . . . puk.

Himalayan Lesser Pied Woodpecker (*Dryobates cathpharius*)

Status: 22-10-1944. C. One seen in mixed tree jungle at 5,000 ft.

Voice: Called occasionally with a rather soft, clear pwik.

Fulvousbreasted Pied Woodpecker (*Dryobates macei*)

Status: 1-2 seen in February and May 1943 on A, in both jungle and shade trees.

Voice: 26-2-1943. An occasional low tak . . . tak.

1-3-1943. The call was a not very powerful pik . . . pik at intervals while feeding, but when the bird was excited at my presence it twice gave a shrill, rapid pik-pipipipipipipi (low-low/rising/high/falling/low). Once as it was flying from one tree to another it gave a curious, soft, rasping kuier-kuier (low/high/low-low/high/low).

Darjeeling Pygmy Woodpecker (*Yungipicus nanus semicoronatus*)

Status: 27-5-1943. A. Two seen in shade trees at 5,000 ft.

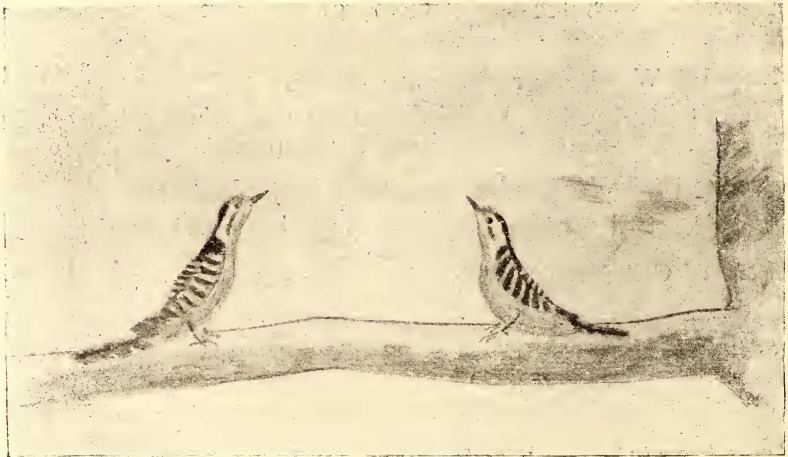
May 1944, C. Two in mixed jungle above Little Rangit River, and three in mixed jungle at about 4,700 ft.

October 1944, C. 1-2 seen in mixed jungle (height not noted).

Voice: 22-10-1944. Now and then one gave a low puk . . . puk.

Behaviour: 27-5-1943. One was feeding in the branches of a Siris tree. It moved along them with a rather jerky motion, stopping to examine a bit of bark and then advancing with little hopping movements. A few minutes later another bird arrived and they started 'formalising' (to use Edmund Selous' word). This consisted of repeatedly flying over each other for a few feet, changing places as it were, first one moving then the other, though not always alternately. There was no real evidence of enmity or antagonism. The performance struck me as more in the nature of a courtship

display than a 'fight' in any sense of the word, but I could not be certain of their sexes though I saw no red on their heads. During the pauses between the little flights both birds as a rule adopted a strangely stiff upright attitude, with the body well away from the branch (though the tail was pressed close against it), and often the head pointing upwards (see fig. below). While in this attitude they kept very still and hardly made any movement. The whole performance continued for about ten minutes without a break. In the end one of the birds flew to another tree some yards away and drummed lightly.



Redeared Bay Woodpecker (*Blythipicus pyrrhotis*)

Status: 2-2-1943, A. One seen in both shade trees and mixed jungle at about 3,000 ft.

Recognition: Its movements seemed to me to be rather heavier than in the case of most other Woodpeckers, perhaps partly because of its size. Flight rather heavy and bounding.

Voice: One, foraging alone, called several times with a loud, chattering, rhythmic call p't'a-a-a-a—p't'a-a-a-a—p't'a-a-a-a—p't'a-a-a-a, pitched fairly high and all the notes the same. This phonetic rendering is a poor one, but it was the nearest I could get to it and it does give fairly accurate general description of the call, which was given rapidly with very little pause between the phrases. The *a* sound was short and sharp and not a pure *a*; it might almost have been rendered by a short staccato *e*.

Tickell's Goldenbacked Woodpecker (*Chrysocolaptes guttacristatus*)

Status: I found this species only once during all my visits—on 25-5-1945, on C, when two were present.

Voice: By answering and repeating the call of one of these birds I attracted it from 2-300 yds. away until it was in a tree almost above my head. After it had called I could see it turn its head while I answered, obviously listening, as it came nearer and nearer. When it had arrived almost above me it gave a much lower, sweeter call of a single note repeated about four times. I replied in a similar

way and we kept this up for about a minute. Then another bird started calling further down the valley and my bird replied, though not so loudly as before. I too joined in, but by then I think it was realising that my calls were spoofs, and it took no further notice of me.

The normal call consisted of a repetition of a single note in series of varying length. The spacings between the repetitions of this note were sufficient to keep each repetition quite separate, but the note itself was very similar to the basis of the ordinary call of the Northern Goldenbacked Woodpecker (*Brachypternus bengalensis*). The note itself was a sharp twe-twe-tyu-tyu-tü-tü-tü usually dropping slightly in pitch after the first few repetitions. When heard close to the concentrated sharpness of the note could be heard as a sort of sudden shutting off of the sound, making it sound like tyu-ck. The love note, if such it really was, consisted of a soft, rather sweet twui-twui-twe-twe, fairly high-pitched.

Speckled Piculet (*Vivia innominata*)

Status: I saw only one, on 28-10-1944 on C, among a large mixed party of small birds in mixed deciduous trees and undergrowth at about 4,300 ft.

Rufous Piculet (*Sasia ochracea*)

Status: 22-4-1945. C. One on a clump of bamboos at 4,500 ft. One also seen in May-June 1945 on C, but details not noted.

Behaviour: 22-4-1945. My attention was first attracted by quite a loud hammering. The bird was hammering hard—almost drumming—on a stem of bamboo some 3 in. in diameter and about 20 ft. above the base. The blows were surprisingly powerful and determined for the size of the bird. After a few minutes of this it flew to another bamboo at about the same level, and then after only a short pause to another and another. Then it settled down to a fairly thorough exploration of the stem, this time not drumming, but proving the stem with a series of short, irregular but powerful taps which produced a more muffled, less ringing sound. The flight from one stem to another was in short hurried bursts, almost a scrambling flight but very swift considering the short distance covered. All its movements were quick and jerky, and I got the impression that the bird was full of compressed power, as though it were being driven by a powerful spring.

Great Himalayan Barbet (*Megalaima virens*)

Status: Plentiful on all visits, though less vociferous in October and January. It kept rather more to the jungle, but was quite often seen in the shade trees.

Voice: 18-5-1943. A low, harsh, falling kryeeeu.

19-5-1943. A continual, rather windy peaweu (high/low) every 2-3 seconds. Great carrying power.

20-5-1943. The calls today sounded more like a pilaweu (high/low/higher). With a little imagination this call might be described as 'Idhar-ao'.

27-4-1945. One perched awkwardly on a bough high above my head and gave a loud, sharp, metallic kit-tt-tt—kitt-tt, fairly high-pitched.

30-5-1945. Another note sounds very like the call of a sea-gull, and this likeness is emphasised when a lot of birds are calling together.

3-6-1945. Two together called loudly with a note quite unlike any other calls I have heard. This was a very harsh grating note, starting quite softly and growing rapidly in volume until it became a loud, grating screech, very strongly suggestive of the call of some gigantic cicada. This call was given several times by both birds.

Behaviour: 27-5-1943. See under Ashy Swallow Shrike.

29-10-1944. One made a short flight from the top of a tree and caught an insect (I suspect a cicada, but could not be sure). It held it for a minute or two in its beak and then slowly swallowed it.

Bluethroated Barbet (*Cyanops asiatica*)

Status: The only time I came across this species was in April 1945 on C, when there were several about in jungle.

Goldenthroated Barbet (*Cyanops franklinii*)

Status: A few seen on all visits except May 1944 (when I must surely have forgotten to note it), but they were not nearly as plentiful as the Great Himalayan Barbet. They usually kept to the jungle and ravines, but now and again I saw one in a shade tree.

Asiatic Cuckoo (*Cuculus canorus*)

Status: May 1943, A, 1-2 heard continually, usually from about 6,000 ft. upwards. I estimated the density at probably one or a pair to 1,500 acres. I found it more usually in forest, less often in ravines or tea blocks.

May 1944, C, one heard most days at about 5,000 ft.

April 1945, C, 1-2 always to be heard.

May-June 1945, C, always a few about, but seemed more thinly distributed than the other cuckoos.

Himalayan Cuckoo (*Cuculus optatus*)

Status: January 1944, B, 1-2 heard.

February 1943, A, not recorded, but probably overlooked.

April 1945, C, numerous.

May 1943, A, fairly numerous. I estimated their density at probably one or a pair to 400-500 acres. I found them more in the ravines than the other cuckoos.

May 1944, C, plentiful all over the jungle, chiefly above 4,000 ft.

May-June 1945, C, fairly plentiful, but less vociferous than in April.

October 1944, C, 1-2 about, but apparently fewer and certainly less vociferous than in summer.

I found this species only in the jungle and ravines, and have no note of seeing them in the shade trees or tea.

Voice: 22-5-1943. Cuk-coo-coo-coo-coo (high—l-o-w) the preliminary cuk being quite soft and slightly higher in tone than the rest of the call, which was low and dull and had something of a booming quality about it. When singing the throat swelled up just like a pouter pigeon's.

25-4-1945. I have several times recently heard a low, gruff, barking prelude to the usual song. One bird I particularly listened to today introduced the song by the following phrases at various times:—

(a) Kyakakak (low-pitched) and some other notes which I was unable to record.

(b) Kakawkuku--kakakawkoku (high/low/high—high/low/rising).

Indian Cuckoo (*Cuculus micropterus*)

Status: April 1945, C, 1-2 to be heard now and again, but did not seem to be as well represented as the other cuckoos.

May 1943, A, fairly numerous. I estimated their density at one or a pair to 700-800 acres; much in ravines.

May, 1944, C, one heard most days 4,500-5,000 ft.

May-June 1945, C, usually 1-2 to be heard, generally below 4,500 ft.

I usually found this species in the jungle and ravines, but I occasionally saw one in the shade trees. Not recorded on my other visits.

Small Cuckoo (*Cuculus poliocephalus*)

Status: February 1943, A, one believed heard once in shade trees but identity not proved.

April 1945, C, one heard once.

May 1943, A, density estimated at one or a pair to 700-800 acres.

May 1944, C, several noted, scattered chiefly above 4,000 ft.

May-June 1945, C, 1-2 noted in jungle, fairly plentiful in shade trees.

Not recorded on my other visits. I found this species quite often in the shade trees as well as the jungle.

Voice: 30-5-1945. I watched one singing from only a few yards away. The song was loud and had great carrying power. The notes were measured and unhurried, and there was a roughly equal interval between them. Pik-tyik-tyi-wi-wa (high-high-higher-higher-lower)—pik-tyik-tyi-wi-wi-wa (high-high-higher-higher-lower-lower)—puk-tyuk-tyu-wu-wu-wa (low-low-high-high-high-low)—puk-tyuk-tyu-wu-wu-wa (low-low-high-high-high-low)—puk-tyuk-tyu-wa (low-low-high-low). I have heard this song given repeatedly at night as well as in the day time in May.

Large Hawk Cuckoo (*Hierococcyx sparveroides*)

Status: January 1944, B, none noted, but possibly overlooked.

February 1943, A, only one seen.

April 1945, C, numerous and vociferous.

May 1943, A, very numerous. Density estimated at one or a pair to 200-300 acres. Not found much in ravines.

May 1944, C, several heard, chiefly above 4,000 ft.

May-June 1945, C, numerous and vociferous.

I found this species mostly in jungle and only occasionally in shade trees.

Voice: 20-5-1943. The call of the birds here strikes me as being slightly different from that of the plains bird (*H. varius*), in the Delta region. Here the call sounds to me like pwe-pwuwit (high-lower/high).

25-4-1945. The birds often call many times in succession on the same note, with no *crescendo* and much less vehemence than when the song rises. I heard one bird today give the song at least 20 times in this way. Later I heard what I believe was the same bird fairly screaming its song from the top of a tall tree, repeating the series *crescendo* time after time.

3-6-1945. One gave the low, shrill introduction to the usual 'Brain-fever' song twice alone, and once was answered with the same call by another bird a few yards away.

Behaviour: See under Black Bulbul.

Plaintive Cuckoo (*Cacomantis merulinus*)

Status: I found none on A or B, but I may well have overlooked them through unfamiliarity. On C I found them fairly plentiful in April, May and June and only a few in October. This species often seems to keep to the shade trees in preference to the jungle.

Voice: 8-6-1944. This species seems to have two principal calls: (a) a rather mournful kiweer—kiweer—ka-ka-ka (low/high—low/high—l-o-w), the final *kas* being usually much quieter than the rest of the call; and (b) a call on an ascending scale, each repetition being pitched slightly higher; it usually seems to be repeated three times or occasionally four. Twe-tya-tyui—twe-tya-tyui—twe-tya-tyui (each phrase high-lower-high-rising; the second and third phrases each rather higher than the preceding one).

1-6-1945. Two in the upper branches of a large tree. At least one of them was calling continually with very loud, clear calls, most of which were as follows: k'leeu-wa-wa . . . cawur-wa-wa-wa (high-low-er . . . low/high—l-o-w-e-r). It also gave a single loud wei (fairly high-pitched) fairly frequently. Several times it also gave rudiments of the other usual call we-wa-wui (high-low-higher), but it never finished this call.

Drongo Cuckoo (*Surniculus lugubris*)

Status: January 1944, B, none noted.

February 1943, A, none noted.

April 1945, C, numerous and vociferous.

May 1943, A, 2 or more seen.

May 1944, C, fairly plentiful.

May-June 1945, C, numerous and vociferous.

October 1944, C, none noted.

Although seen quite often in shade trees I think they kept rather more to the jungle.

Voice: 9-6-1944. Its song can be heard all day long from almost any of the patches of jungle in the tea garden (C)—an ascending series of 6-7 notes pe-pe-pe-pe-pe-pe.

17-4-1945. I watched one singing for some time. It repeated the simple song with only short pauses between and then 'rested' for 3-4 minutes before singing again. It usually began the song with only four notes, then increased to five, and now and again to six. The notes were clear and regularly spaced, both in time interval and ascent of the scale, and they were invariably equally emphasised: pu-pu-pe-pe-pi. The first two notes were very slightly slurred, but the others were clear and rounded, the slight difference in inflection no doubt being produced by their approach to the upper limits of the bird's compass.

Redwinged Crested Cuckoo (*Clamator coromandus*)

Status: A single bird seen in jungle on B by the Little Rangit River in May 1944.

Field Recognition: 6-6-1944. The flight was slow and leisurely, only a foot or two above the ground. In flight the bird looked, from the side, rather like a small Crow Pheasant (*Centropus sinensis*), with red-brown wings and blackish-brown body; but seen from the front the difference was at once apparent as the bird had some white on the chest.

Large Greenbilled Malkoha (*Rhopodytes tristis*)

Status: A single bird believed seen among tea at 4,500 ft. on 3-6-1945 on C, but identity not proved.

Broadbilled Roller (*Eurystomus orientalis*)

Status: Two seen on 6-6-1944 on C, near bottom of valley (about 2,500-3,000 ft.). In the period May-June a bird was reported (but not seen by me) from near the bottom of the valley on C, which could only have been of this species.

Voice: 6-6-1944. The only call I have heard is a persistent, short, harsh kkr . . . kkr, given all the time I had the birds under observation (and they could see me).

Whitebreasted Kingfisher (*Halcyon smyrnensis*)

Status: A single bird seen about the Little Rangit River on C in May 1944.

Hoopoe (*Upupa epops*)

Status: April 1945, C, single birds seen twice at about 4,500 ft. on a path.

Redheaded Trogon (*Harpactes erythrocephalus*)

Status: One party believed seen on several occasions in fairly dense mixed jungle at about 4,500 ft. on C in June 1945, but the identity of these birds was not established with certainty.

Nepal House Swift (*Micropus affinis*)

Status: Seemed fairly plentiful on all visits to all three gardens.

Voice: 25-5-1943. A nesting colony at the tea factory on A. The principal calls I heard were as follows:—

(a) A very rapid siksiksiksik—sik—sik—siksiksik all pitched on about the same note.

(b) A harder, much more metallic syik-syik-syik-syik and a suk-suk-suk-suk, pitched fairly high, which usually seemed to be given when the bird was near the wall, flying up towards the nesting site.

(c) A shivering scream chrri-i-i-i-i-i-i-i-i or chrr-r-r-r-r-r-r-r-r-r, and falling; very similar to a call of the Common Indian House Swift.

(d) I also heard one bird give a very low muttering, quite unlike any of the other notes, as it passed a foot or two above my head.

28-5-1943. Of about 50 birds flying round just above the hillside, one or two of them gave a low chir once or twice, which could have been audible only a few yards away.

Whitethroated Spinetail Swift (*Hirundapus caudacutus*)

Status: 24-4-1945 to 2-5-1945. Two, sometimes three, seen above the valley almost every day.

Collared Scops Owl (*Otus bakkamoena*)

Status: 6-6-1945. C. One believed seen in a tree in dense bush and tree jungle at 4,500 ft. Beyond the fact that it was small (smaller than a Barred Owllet), that it had ear-tufts and that its general colouring was a light, rather yellowish brown, I could see no details. It kept giving a broken series of low notes, which at once reminded me of the softer notes sometimes given by the Common House Crow, and could be likened to a series of quiet soft coughs.

Barred Owllet (*Glaucidium cuculoides*)

Status: A single bird seen on 26-10-1944 on C at 4,500 ft., perched on a bamboo stump in a small ravine.

Collared Pygmy Owllet (*Glaucidium brodiei*)

Status: A single bird seen on 25 and 26-2-1943 on A at close quarters in jungle. Others believed heard calling at night in April 1945 on C, May 1943 on A, May 1944 on C, May and June 1945 on C, and October 1944 on C, but birds not seen and identity not proved.

Voice: The call which I thought to be given by this bird was a subdued pu . . . pu . . . pu . . . (timed at every 9 seconds in one case) and kept up for many minutes without a break.

Black (King) Vulture (*Sarcogyps calvus*)

Status: Usually 1-2 to be seen in the course of a visit.

Himalayan Griffon Vulture (*Gyps himalayensis*)

Status: One believed seen soaring several times April-June 1945.

Whitebacked Vulture (*Pseudogyps bengalensis*)

Status: One or two seen April 1945, May 1944 and 1945, and June 1945.

Lämmergeier (*Gypaëtus barbatus*)

Status: Single birds believed seen February 1943, May 1944, and April, May and June 1945.

Hobby (*Falco severus*)

Status: One believed seen in dense mixed jungle at 5,500 ft. on A on 28-5-1943, but identity not proved.

Kestrel (*Cerchneis tinnunculus*)

Status: At least one seen January 1944 on A, and two seen in October 1944 on C.

Eastern Steppe Eagle (*Aquila nipalensis*)

Status: One believed seen soaring in May 1944.

Hodgson's Hawk Eagle (*Spizaëtus nipalensis*)

Status: One believed seen in May 1943 on A; one soaring just above the jungle at 5,000 ft. on C in April, 1945.

Crested Serpent Eagle (*Haematornis cheela*)

Status: Generally 1-2 about, sometimes soaring high, more often quite low.

Voice: 23-4-1945. The loud, clear call k'lee-leu-leu is audible for a great distance.

Brahminy Kite (*Haliastur indus*)

Status: Always one pair about on C, at 4,500 ft. in May 1944, but no others noticed.

Pariah Kite (*Milvus migrans govinda*)

Status: A few occasionally about, but not numerous and not mentioned in my records for January or October. Some birds may have been confused with the next species.

Blackeared Kite (*Milvus migrans lineatus*)

Status: Several identified for the first time in April 1945, on C, and 1-2 believed seen in May and June. No doubt overlooked on previous visits and possibly confused with the last-mentioned species.

Shikra (*Astur badius*)

Status: 1-2 seen in April-June 1945 on C, but none on other visits.

Voice: 2-6-1945. One gave a fairly loud, clear kiteu (high/falling) repeated three times, while carrying out aerobatics high above the hillside.

29-5-1945. One gave a loud, far-reaching kee . . . kee-kee, pitched fairly high.

Pintailed Green Pigeon (*Sphenocercus apicaudus*)

Status: May 1944, C. A pair reliably reported as breeding in a shooting box just above the Little Rangit River, though I did not see them myself.

Spotted Dove (*Streptopelia chinensis*)

Status: Plentiful in April, May and June on A and C, and a few still about in October on C. I found them almost as often in the shade trees growing among the tea as in the jungle.

Bartailed Cuckoo-Dove (*Macropygia unchall*)

Status: A single bird believed seen on 29-5-1945 on C at about 4,500 ft., but identity not proved.

Blackbacked Kalij Pheasant (*Gemnaeus melanotus*)

Status: 1-2 seen on most visits, as often in tea as in jungle.

Voice: 19-1-1944. One was flushed by a dog, and as it flew down the hillside it gave a whistling psee-psee-psee-psee not at all the sort of noise one would normally expect from a pheasant.

Common Hill Partridge (*Arborophila torqueola*)

Status: Two believed seen in October 1944 on C and others believed heard; at least two believed seen in April 1945 on C, all in jungle. Although I think this identification was correct, I do not regard it as proved; it is just possible that these birds were another species of Hill Partridge.

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